

IDENTIFICATION

PRODUCT CODE:	MAINDEC-8/E-D0AB
PRODUCT NAME:	PDP-8/E INSTRUCTION TEST 1
DATE CREATED:	MAY 10, 1971
MAINTAINER:	DIAGNOSTIC GROUP
AUTHOR:	ED FORTMILLER

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1. ABSTRACT

THIS IS A DIAGNOSTIC PROGRAM FOR TESTING THE AND, TAD,
OPERATE, AND BASIC MQ, INSTRUCTIONS OF THE PDP-8/E ONLY.

2. REQUIREMENTS

2.1 EQUIPMENT

A PDP-8/E EQUIPPED WITH TELETYPE.

2.2 STORAGE

THIS PROGRAM USES LOCATIONS 0000-5314. THE BINARY LOADER MUST
BE STORED IN THE LAST MEMORY PAGE.

2.3 PRELIMINARY PROGRAMS

3. LOADING PROCEDURE

3.1 METHOD

THE STANDARD BINARY LOADER IS USED.

4. STARTING PROCEDURE

4.1 CONTROL SWITCH SETTINGS

SR=7777

4.2 STARTING ADDRESS

0200

4.3 OPERATOR ACTION

1. SET SR TO 200 AND PRESS LOAD ADDRESS.
2. SET SR TO 7777 AND PUSH CLEAR AND CONTINUE
3. PROGRAM WILL HALT. MA=147
4. IF AC IS NOT EQUAL TO 0000 AN ERROR HAS OCCURRED.
5. PUSH CONTINUE, PROGRAM WILL RUN UNTIL STOPPED OR UNTIL
AN ERROR IS ENCOUNTERED.

5. OPERATING PROCEDURE

SAME AS SECTION 4.

6. ERRORS

6.1 ERROR HALTS AND DESCRIPTION

SEE LISTING.

6.2 ERROR RECOVERY

IF IT IS DESIRED TO LOOP ON THE TEST CAUSING THE ERROR, REPLACE THE OPERATE INSTRUCTION(S) PRECEDING THE HLT WITH A JMP TO THE BEGINNING OF THE TEST.

7. RESTRICTIONS

7.1 STARTING RESTRICTIONS: NONE

7.2 OPERATING RESTRICTIONS: NONE

8. MISCELLANEOUS

8.1 EXECUTION TIME

THE TELETYPE BELL RINGS AT THE END OF 1440 PROGRAM PASSES WHICH IS APPROXIMATELY EVERY 5 SECONDS.

9.

PROGRAM DESCRIPTION

THE PROGRAM CONSISTS OF MANY INDIVIDUAL TESTS. IN MOST CASES EACH TEST CHECKS ONLY ONE FUNCTION AND USES PREVIOUSLY TESTED FUNCTIONS AS A BASIS FOR THE TEST. THE PROGRAM COUNTER ACTION IS STRICTLY SEQUENTIAL EXCEPT FOR SKIPS. THE ONLY JMP INSTRUCTIONS USED ARE AT THE BEGINNING AND END OF THE PROGRAM. THE SEQUENCE OF TESTING IS AS FOLLOWS:

1. TEST ALL OPERATE FUNCTIONS INDIVIDUALLY EXCEPT FOR ROTATES.
2. TEST "TAD" INSTRUCTION.
3. TEST ROTATE FUNCTIONS.
4. TEST "BSW" INSTRUCTION.
5. GROUP 1 OPERATE INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.
6. GROUP 2 OPERATE INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.
7. MQ INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.
8. TEST "AND" INSTRUCTION.

THE TELETYPE BELL RINGS APPROXIMATELY EVERY 5 SECONDS.

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LISTING

/PDP-8/E INSTRUCTION TEST 1 MAINDEC-8E-DBAB
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/TAPE 1

7002	BSW=7002	/SWAP BYTES IN AC
7401	NOPE=7401	/NOP
7601	CLAE=7601	/CLEAR AC
7421	MOI=7421	/LOAD MQ FROM AC THEN CLEAR AC
7501	MOA=7501	/INCLUSIVE OR, MQ AND AC
7621	CAM=7621	/CLEAR AC AND MQ
7521	SWP=7521	/SWAP AC AND MQ
7701	ACL=7701	/LOAD AC FROM MQ, CLEAR MQ

0000	0000	*0	0
0001	0001		JMP 1
0002	0002		0002
0003	0003		0003
0004	0004		0
0005	0005		0000
0006	7402	HALT,	HLT
0007	7000	NOOP,	NOP
0010	0000		0

/CONSTANTS AND VARIABLES

0020	0020	*20	0000, 0000
0021	0021	K0001,	0001
0022	0022	K0002,	0002
0023	0023	K3,	3
0024	0024	K0004,	0004
0025	0025	K6,	6
0026	0026	K0010,	0010
0027	0027	K14,	14
0030	0030	K0020,	0020
0031	0031	K30,	30
0032	0032	K0040,	0040
0033	0033	K60,	60
0034	0034	K0100,	0100
0035	0035	K140,	140
0036	0036	K0200,	0200
0037	0037	K300,	300
0040	0040	K0400,	0400
0041	0041	K600,	600
0042	0042	K1000,	1000
0043	0043	K1234,	1234
0044	0044	K1400,	1400
0045	0045	K2000,	2000
0046	0046	K3000,	3000
0047	0047	K3312,	3312
0050	0050	K4000,	4000
0051	0051	K7717,	7717
0052	0052	K7776,	7776
0053	0053	K7775,	7775

0054	7773	K7773,	7773
0055	7767	K7767,	7767
0056	7757	K7757,	7757
0057	7737	K7737,	7737
0060	7177	K7177,	7177
0061	7677	K7677,	7677
0062	7577	K7577,	7577
0063	7377	K7377,	7377
0064	6777	K6777,	6777
0065	5777	K5777,	5777
0066	3777	K3777,	3777
0067	7777	K7777,	7777
0070	5252	K5252,	5252
0071	2525	K2525,	2525
0072	6000	K6000,	6000
0073	7000	K7000,	7000
0074	7400	K7400,	7400
0075	7600	K7600,	7600
0076	7740	K7740,	7740
0077	7760	K7760,	7760
0100	7770	K7770,	7770
0101	7774	K7774,	7774

0102	0007	K0007,	0007
0103	0067	K0067,	0067
0104	0017	K0017,	0017
0105	0037	K0037,	0037
0106	0077	K0077,	0077
0107	0177	K0177,	0177
0110	0377	K0377,	0377
0111	0777	K0777,	0777
0112	1777	K1777,	1777
0113	7700	K7700,	7700
0114	5225	K5225,	5225
0115	2552	K2552,	2552
0116	0770	K0770,	0770
0117	7007	K7007,	7007
0120	0207	BEL,	0207
0121	5140	BLCNT,	-2640
0122	5140	BLCN,	-2640

0144	1067	*144	
0145	7200	/TAD,CLA,HLT,TEST	
0146	7402	START, TAD K7777	
		CLA	/AC SHOULD=0
		HLT	/SET SR TO 7777, CONTINUE
		/SKIP TEST	
0147	7410	SKP	
0150	7402	HLT	/SKP FAILED
		/SEA TEST 1	
0151	7200	CLA	

0152	7440	SEA	
0153	7402	HLT	/SEA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL ZERO
0154	7450	SNA	
0155	7410	SKP	
0156	7402	HLT	/SNA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL ZERO
/SEA TEST 2			
0157	7200	CLA	
0160	1050	TAD K4000	
0161	7440	SEA	
0162	7410	SKP	
0163	7402	HLT	/SEA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 4000
0164	7450	SNA	
0165	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 4000
/SEA TEST 3			
0166	7200	CLA	
0167	1045	TAD K2000	
0170	7440	SEA	
0171	7410	SKP	
0172	7402	HLT	/SEA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 2000
0173	7450	SNA	
0174	7402	HLT	/SNA SHOULD HAVE SKIPPED
0175	7000	NOP	/AC SHOULD EQUAL 2000
0176	7000	NOP	
0177	7410	SKP	/SKIP OVER JMP START.
	0200	*200	
0200	5144	BEGIN, JMP START	/BEGINNING OF INSTRUCTION TEST 1.
/SEA TEST 4			
0201	7200	CLA	
0202	1042	TAD K1000	
0203	7440	SEA	
0204	7410	SKP	
0205	7402	HLT	/SEA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 1000
0206	7450	SNA	
0207	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 10000
/SEA TEST 5			
0210	7200	CLA	
0211	1040	TAD K0400	
0212	7440	SEA	
0213	7410	SKP	
0214	7402	HLT	/SEA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0400
0215	7450	SNA	
0216	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0400
/SEA TEST 6			

0217	7200	CLA	
0220	1036	TAD K0200	
0221	7440	SEA	
0222	7410	SKP	
0223	7402	HLT	/SEA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0200
0224	7450	SNA	
0225	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0200
/SEA TEST 7			
0226	7200	CLA	
0227	1034	TAD K0100	
0230	7440	SEA	
0231	7410	SKP	
0232	7402	HLT	/SEA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0100
0233	7450	SNA	
0234	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0100
/SEA TEST 8			
0235	7200	CLA	
0236	1032	TAD K0040	
0237	7440	SEA	
0240	7410	SKP	
0241	7402	HLT	/SEA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0040
0242	7450	SNA	
0243	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0040
/SEA TEST 9			
0244	7200	CLA	
0245	1030	TAD K0020	
0246	7440	SEA	
0247	7410	SKP	
0250	7402	HLT	/SEA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0020
0251	7450	SNA	
0252	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0020
/SEA TEST 10			
0253	7200	CLA	
0254	1026	TAD K0010	
0255	7440	SEA	
0256	7410	SKP	
0257	7402	HLT	/SEA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0010
0260	7450	SNA	
0261	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0010
/SEA TEST 11			
0262	7200	CLA	
0263	1024	TAD K0004	

0264	7440	SZA	
0265	7410	SKP	
0266	7402	HLT	/SZA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0004
0267	7450	SNA	
0270	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0004

/SZA TEST 12

0271	7200	CLA	
0272	1022	TAD K0002	
0273	7440	SZA	
0274	7410	SKP	
0275	7402	HLT	/SZA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0002
0276	7450	SNA	
0277	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0002

/SZA TEST 13

0300	7200	CLA	
0301	1021	TAD K0001	
0302	7440	SEA	
0303	7410	SKP	
0304	7402	HLT	/SZA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0001
0305	7450	SNA	
0306	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0001

/SPA TEST 1

0307	7200	CLA	
0310	1066	TAD K3777	
0311	7510	SPA	
0312	7402	HLT	/SPA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 3777

/SPA TEST 2

0313	7200	CLA	
0314	1050	TAD K4000	
0315	7510	SPA	
0316	7410	SKP	
0317	7402	HLT	/SPA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 4000

/SMA TEST 1

0320	7200	CLA	
0321	1066	TAD K3777	
0322	7500	SMA	
0323	7410	SKP	
0324	7402	HLT	/SMA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 3777

/SMA TEST 2

0325	7200	CLA	
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0326	1050	TAD K4000	
0327	7500	SMA	
0330	7402	HLT	/SMA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 4000

/CMA TEST 1

0331	7200	CLA	
0332	1067	TAD K7777	
0333	7040	CMA	
0334	7440	SEA	
0335	7402	HLT	/CMA DID NOT COMPLEMENT AC
			/AC SHOULD EQUAL 0000

/CMA - TAD TEST 1

0336	7200	CLA	
0337	1071	TAD K2525	
0340	7040	CMA	
0341	7450	SNA	
0342	7402	HLT	/TAD OR CMA ERROR
			/AC SHOULD EQUAL 5252

0343	1071	TAD K2525	
0344	7040	CMA	
0345	7440	SEA	
0346	7402	HLT	/TAD OR CMA ERROR
			/AC SHOULD EQUAL 0000

/CMA - TAD TEST 2

0347	7200	CLA	
0350	1070	TAD K5252	
0351	7040	CMA	
0352	7450	SNA	
0353	7402	HLT	/TAD OR CMA ERROR
			/AC SHOULD EQUAL 2525

0354	1070	TAD K5252	
0355	7040	CMA	
0356	7440	SEA	
0357	7402	HLT	/TAD OR CMA ERROR
			/AC SHOULD EQUAL 0000

/CMA - TAD TEST 3

0360	7200	CLA	
0361	1067	TAD K7777	
0362	7040	CMA	
0363	7440	SEA	
0364	7402	HLT	/TAD OR CMA ERROR
			/AC SHOULD EQUAL 0000

/IAC TEST 1

0365	7200	CLA	
0366	7001	IAC	
0367	7440	SEA	
0370	7410	SKP	
0371	7402	HLT	/IAC DID NOT INCREMENT
			/AC SHOULD EQUAL 0001

/IAC TEST 2

0372	7200	CLA	
0373	1067	TAD K7777	
0374	7001	IAC	

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0375 7440      SEA
0376 7402      HLT          /IAC DID NOT INCREMENT
                               /AC SHOULD EQUAL 0000

                               /IAC TEST 3
0377 7200      CLA
0400 1101      TAD K7774
0401 7001      IAC
0402 7001      IAC
0403 7001      IAC
0404 7001      IAC
0405 7440      SEA
0406 7402      HLT          /IAC NOT INCREMENTING
                               /AC SHOULD EQUAL 0000

                               /SEL TEST 1
0407 7200      CLA
0410 7100      CLL          /CLEAR LINK
0411 7004      RAL          /CLEAR LINK SAFETY
0412 7430      SEL
0413 7402      HLT          /SEL SHOULD HAVE SKIPPED
                               /LINK SHOULD EQUAL ZERO

                               /SEL TEST 2
0414 7200      CLA
0415 7100      CLL          /CLEAR LINK
0416 7020      CHL          /COMPLEMENT LINK
0417 1050      TAD K4000
0420 7004      RAL          /SET LINK SAFETY
0421 7430      SEL
0422 7410      SKP
0423 7402      HLT          /SEL SHOULD NOT HAVE SKIPPED
                               /LINK SHOULD EQUAL ONE

                               /SNL TEST 1
0424 7200      CLA
0425 7100      CLL          /CLEAR LINK
0426 7004      RAL          /CLEAR LINK SAFETY
0427 7420      SNL
0430 7410      SKP
0431 7402      HLT          /SNL SHOULD NOT HAVE SKIPPED
                               /LINK SHOULD EQUAL ZERO

                               /SNL TEST 2
0432 7200      CLA
0433 7100      CLL          /CLEAR LINK
0434 7020      CHL          /COMPLEMENT LINK
0435 1050      TAD K4000
0436 7004      RAL          /SET LINK SAFETY
0437 7420      SNL
0440 7402      HLT          /SNL SHOULD HAVE SKIPPED
                               /LINK SHOULD EQUAL ONE

                               /CLL TEST 1
0441 7200      CLA
0442 1050      TAD K4000

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0443 7004      RAL          /SET LINK
0444 7420      SNL
0445 0252      JMP CLL11    /CANNOT SET LINK WITH RAL
                               /TRY A CML

0446 7100      CLL1, CLL
0447 7430      SEL
0450 7402      HLT          /CLL DID NOT CLEAR LINK
                               /LINK SHOULD EQUAL ONE

0451 0256      JMP ,+5
0452 7020      CLL1, CML
0453 7420      SNL
0454 7402      HLT          /CANNOT SET LINK WITH
                               /RAL OR CML. CANNOT
                               /PERFORM CLL TEST 1

0455 5246      JMP CLL1

                               /CML TEST 1
0456 7100      CMLT1, CLL
0457 7430      SEL
0460 7402      HLT          /CLL DID NOT CLEAR LINK
0461 7020      CML
0462 7420      SNL
0463 7402      HLT          /CML DID NOT SET LINK
0464 7020      CML
0465 7430      SEL
0466 7402      HLT          /CML DID NOT RESET LINK

                               /CLA TEST 1 (OPERATE GROUP 2)
0467 7200      CLA
0470 1067      TAD K7777
0471 7600      7600
0472 7440      SEA
0473 7402      HLT          /CLA (7600) DID NOT CLEAR AC
                               /AC SHOULD EQUAL 0000

                               /OSR TEST 1
0474 7200      CLA
0475 7404      OSR
0476 7040      CMA
0477 7440      SEA
0500 7402      HLT          /OSR DID NOT SET AC TO 7777
                               /AC SHOULD=0

                               /NOP TEST 1 (OPERATE GROUP 1)
0501 7200      CLA
0502 7100      CLL          /AC AND LINK EQUAL ZERO
0503 7000      7000        /TEST INSTRUCTION
0504 7450      SNA
0505 7430      SEL
0506 7402      HLT          /NOP FAILURE
                               /AC AND LINK SHOULD BE ZERO

                               /NOP TEST 2 (OPERATE GROUP 2)
0507 7200      CLA

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0510	7100	CLL	/AC AND LINK EQUAL ZERO
0511	7400	7400	/TEST INSTRUCTION
0512	7430	SNA	
0513	7430	SZL	
0514	7402	HLT	/NOP FAILURE
			/AC AND LINK SHOULD BE ZERO
/TAD TEST 1			
0515	7200	CLA	
0516	1066	TAD K3777	/OPERAND 1
0517	1050	TAD K4000	/OPERAND 2
0520	7040	CMA	
0521	7440	SZA	
0522	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 2			
0523	7200	CLA	
0524	1065	TAD K5777	/OPERAND 1
0525	1045	TAD K2000	/OPERAND 2
0526	7040	CMA	
0527	7440	SZA	
0530	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 3			
0531	7200	CLA	
0532	1064	TAD K6777	/OPERAND 1
0533	1042	TAD K1000	/OPERAND 2
0534	7040	CMA	
0535	7440	SZA	
0536	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 4			
0537	7200	CLA	
0540	1063	TAD K7377	/OPERAND 1
0541	1040	TAD K0400	/OPERAND 2
0542	7040	CMA	
0543	7440	SZA	
0544	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 5			
0545	7200	CLA	
0546	1062	TAD K7577	/OPERAND 1
0547	1036	TAD K0200	/OPERAND 2
0550	7040	CMA	
0551	7440	SZA	
0552	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 6			
0553	7200	CLA	
0554	1061	TAD K7677	/OPERAND 1
0555	1034	TAD K0100	/OPERAND 2
0556	7040	CMA	
0557	7440	SZA	
0560	7402	HLT	/TAD ERROR

/TAD TEST 7			
0561	7200	CLA	
0562	1057	TAD K7737	/OPERAND 1
0563	1032	TAD K0040	/OPERAND 2
0564	7040	CMA	
0565	7440	SZA	
0566	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 8			
0567	7200	CLA	
0570	1056	TAD K7757	/OPERAND 1
0571	1030	TAD K0020	/OPERAND 2
0572	7040	CMA	
0573	7440	SZA	
0574	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 9			
0575	7200	CLA	
0576	1055	TAD K7767	/OPERAND 1
0577	1026	TAD K0010	/OPERAND 2
0600	7040	CMA	
0601	7440	SZA	
0602	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 10			
0603	7200	CLA	
0604	1054	TAD K7773	/OPERAND 1
0605	1024	TAD K0004	/OPERAND 2
0606	7040	CMA	
0607	7440	SZA	
0610	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 11			
0611	7200	CLA	
0612	1053	TAD K7775	/OPERAND 1
0613	1022	TAD K0002	/OPERAND 2
0614	7040	CMA	
0615	7440	SZA	
0616	7402	HLT	/TAD ERROR
/TAD TEST 12			
0617	7200	CLA	
0620	1052	TAD K7776	/OPERAND 1
0621	1021	TAD K0001	/OPERAND 2
0622	7040	CMA	
0623	7440	SZA	
0624	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000
/TAD TEST 13			
0625	7200	CLA	
0626	7100	CLL	
0627	1050	TAD K4000	/OPERAND 1

0630	1050	TAD K4000	/OPERAND 2
0631	7430	SZL	
0632	7440	SEA	
0633	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD BE EQUAL ONE,
/TAD TEST 14			
0634	7200	CLA	
0635	7100	CLL	
0636	1072	TAD K6000	/OPERAND 1
0637	1045	TAD K2000	/OPERAND 2
0640	7430	SZL	
0641	7440	SEA	
0642	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 15			
0643	7200	CLA	
0644	7100	CLL	
0645	1073	TAD K7000	/OPERAND 1
0646	1042	TAD K1000	/OPERAND 2
0647	7430	SZL	
0650	7440	SEA	
0651	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 16			
0652	7200	CLA	
0653	7100	CLL	
0654	1074	TAD K7400	/OPERAND 1
0655	1040	TAD K0400	/OPERAND 2
0656	7430	SZL	
0657	7440	SEA	
0660	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 17			
0661	7200	CLA	
0662	7100	CLL	
0663	1075	TAD K7600	/OPERAND 1
0664	1036	TAD K0200	/OPERAND 2
0665	7430	SZL	
0666	7440	SEA	
0667	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 18			
0670	7200	CLA	
0671	7100	CLL	
0672	1113	TAD K7700	/OPERAND 1
0673	1034	TAD K0100	/OPERAND 2
0674	7430	SZL	
0675	7440	SEA	
0676	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 19			
0677	7200	CLA	
0700	7100	CLL	

0701	1076	TAD K7740	/OPERAND 1
0702	1032	TAD K0040	/OPERAND 2
0703	7430	SZL	
0704	7440	SEA	
0705	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 20			
0706	7200	CLA	
0707	7100	CLL	
0710	1077	TAD K7760	/OPERAND 1
0711	1030	TAD K0020	/OPERAND 2
0712	7430	SZL	
0713	7440	SEA	
0714	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 21			
0715	7200	CLA	
0716	7100	CLL	
0717	1100	TAD K7770	/OPERAND 1
0720	1026	TAD K0010	/OPERAND 2
0721	7430	SZL	
0722	7440	SEA	
0723	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 22			
0724	7200	CLA	
0725	7100	CLL	
0726	1101	TAD K7774	/OPERAND 1
0727	1024	TAD K0004	/OPERAND 2
0730	7430	SZL	
0731	7440	SEA	
0732	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 23			
0733	7200	CLA	
0734	7100	CLL	
0735	1052	TAD K7776	/OPERAND 1
0736	1022	TAD K0002	/OPERAND 2
0737	7430	SZL	
0740	7440	SEA	
0741	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 24			
0742	7200	CLA	
0743	7100	CLL	
0744	1067	TAD K7777	/OPERAND 1
0745	1021	TAD K0001	/OPERAND 2
0746	7430	SZL	
0747	7440	SEA	
0750	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE


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/TAD TEST 25
0751 7200 CLA
0752 7100 CLL
0753 7020 CML
0754 1050 TAD K4000 /OPERAND 1
0755 1050 TAD K4000 /OPERAND 2
0756 7420 SNL
0757 7440 SEA
0760 7402 HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

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/TAD TEST 26
0761 7200 CLA
0762 7100 CLL
0763 1066 TAD K3777 /OPERAND 1
0764 1045 TAD K2000 /OPERAND 2
0765 1045 TAD K2000 /OPERAND 3
0766 7040 CMA
0767 7420 SNL
0770 7440 SEA
0771 7402 HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

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/TAD TEST 27
0772 7200 CLA
0773 7100 CLL
0774 1065 TAD K5777 /OPERAND 1
0775 1042 TAD K1000 /OPERAND 2
0776 1042 TAD K1000 /OPERAND 3
0777 7040 CMA
1000 7420 SNL
1001 7440 SEA /TAD ERROR AC SHOULD EQUAL 0000
1002 7402 HLT /LINK SHOULD EQUAL ZERO

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/TAD TEST 28
1003 7200 CLA
1004 7100 CLL
1005 1064 TAD K6777 /OPERAND 1
1006 1040 TAD K0400 /OPERAND 2
1007 1040 TAD K0400 /OPERAND 3
1010 7040 CMA
1011 7420 SNL
1012 7440 SEA
1013 7402 HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

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/TAD TEST 29
1014 7200 CLA
1015 7100 CLL
1016 1063 TAD K7377 /OPERAND 1
1017 1036 TAD K0200 /OPERAND 2
1020 1036 TAD K0200 /OPERAND 3
1021 7040 CMA
1022 7420 SNL
1023 7440 SEA
1024 7402 HLT
/TAD ERROR, AC SOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

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/TAD TEST 30
1025 7200 CLA
1026 7100 CLL
1027 1062 TAD K7577 /OPERAND 1
1030 1034 TAD K0100 /OPERAND 2
1031 1034 TAD K0100 /OPERAND 3
1032 7040 CMA
1033 7420 SNL
1034 7440 SEA
1035 7402 HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

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/TAD TEST 31
1036 7200 CLA
1037 7100 CLL
1040 1061 TAD K7677 /OPERAND 1
1041 1032 TAD K0040 /OPERAND 2
1042 1032 TAD K0040 /OPERAND 3
1043 7040 CMA
1044 7420 SNL
1045 7440 SEA
1046 7402 HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

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/TAD TEST 32
1047 7200 CLA
1050 7100 CLL
1051 1057 TAD K7737 /OPERAND 1
1052 1030 TAD K0020 /OPERAND 2
1053 1030 TAD K0020 /OPERAND 3
1054 7040 CMA
1055 7420 SNL
1056 7440 SEA
1057 7402 HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

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/TAD TEST 33
1060 7200 CLA
1061 7100 CLL
1062 1056 TAD K7757 /OPERAND 1
1063 1026 TAD K0010 /OPERAND 2
1064 1026 TAD K0010 /OPERAND 3
1065 7040 CMA
1066 7420 SNL
1067 7440 SEA
1070 7402 HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

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/TAD TEST 34
1071 7200 CLA
1072 7100 CLL
1073 1055 TAD K7767 /OPERAND 1
1074 1024 TAD K0004 /OPERAND 2
1075 1024 TAD K0004 /OPERAND 3
1076 7040 CMA
1077 7420 SNL
1100 7440 SEA

```

1101 7402 HLT /TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/TAD TEST 35

1102 7200 CLA
1103 7100 CLL
1104 1004 TAD K7773 /OPERAND 1
1105 1022 TAD K0002 /OPERAND 2
1106 1022 TAD K0002 /OPERAND 3
1107 7040 CMA
1110 7420 SNL
1111 7440 SEA
1112 7402 HLT /TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/TAD TEST 36

1113 7200 CLA
1114 7100 CLL
1115 1053 TAD K7775 /OPERAND 1
1116 1021 TAD K0001 /OPERAND 2
1117 1021 TAD K0001 /OPERAND 3
1120 7040 CMA
1121 7420 SNL
1122 7430 SEL
1123 7402 HLT /TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/TAD TEST 37

1124 7200 CLA /101MB, CR.
1125 7100 CLL
1126 1021 TAD K0001 /0+1=1
1127 1023 TAD K3 /1+3=4
1130 1054 TAD K7773 /4+7773=7777
1131 7040 CMA /0
1132 7420 SNL
1133 7440 SEA
1134 7402 HLT /TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 38.

1135 7200 CLA /91 MB, CR.
1136 7100 CLL
1137 1022 TAD K0002 /0+2=2
1140 1025 TAD K6 /2+6=10
1141 1055 TAD K7767 /10+7767=7777
1142 7040 CMA /0
1143 7420 SNL
1144 7440 SEA
1145 7402 HLT /TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 39.

1146 7200 CLA /81 MB, CR.
1147 7100 CLL
1150 1024 TAD K0004 /0+4=4
1151 1027 TAD K14 /4+14=20

1152 1056 TAD K7757 /20+7757=7777
1153 7040 CMA /0
1154 7420 SNL
1155 7440 SEA
1156 7402 HLT /TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 40.

1157 7200 CLA /71 MB, CR.
1160 7100 CLL
1161 1026 TAD K0010 /0+10=10
1162 1031 TAD K30 /10+30=40
1163 1057 TAD K7737 /40+7737=7777
1164 7040 CMA /0
1165 7420 SNL
1166 7440 SEA
1167 7402 HLT /TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 41.

1170 7200 CLA /61 MB, CR.
1171 7100 CLL
1172 1030 TAD K0020 /0+20=20
1173 1033 TAD K60 /20+60=100
1174 1061 TAD K7677 /100+7677=7777
1175 7040 CMA /0
1176 7420 SNL
1177 7440 SEA
1200 7402 HLT /TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 42.

1201 7200 CLA /51 MB, CR.
1202 7100 CLL
1203 1032 TAD K0040 /0+40=40
1204 1035 TAD K140 /40+140=200
1205 1062 TAD K7577 /200+7577=7777
1206 7040 CMA /0
1207 7420 SNL
1210 7440 SEA
1211 7402 HLT /TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 43.

1212 7200 CLA /41 MB, CR.
1213 7100 CLL
1214 1034 TAD K0100 /0+100=100
1215 1037 TAD K300 /100+300=400
1216 1063 TAD K7377 /400+7377=7777
1217 7040 CMA /0
1220 7420 SNL
1221 7440 SEA
1222 7402 HLT /TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 44.

1223 7200 CLA /31 MB, CR.
1224 7100 CLL
1225 1036 TAD K0200 /0+200=200
1226 1041 TAD K600 /200+600=1000

1227	1064	TAD K6777	/1000+6777=7777
1230	7040	CMA	/0
1231	7420	SNL	
1232	7440	SEA	
1233	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.
/TAD TEST 45.			
1234	7200	CLA	/21 MB, CR.
1235	7100	CLL	/
1236	1040	TAD K0400	/0+400=400
1237	1044	TAD K1400	/400+1400=2000
1240	1065	TAD K5777	/2000+5777=7777
1241	7040	CMA	/0
1242	7420	SNL	
1243	7440	SEA	
1244	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.
/TAD TEST 46 /11 MB, CR.			
1245	7200	CLA	
1246	7100	CLL	
1247	1042	TAD K1000	/0+1000=1000
1250	1046	TAD K3000	/1000+3000=4000
1251	1066	TAD K3777	/4000+3777=7777
1252	7040	CMA	/0
1253	7420	SNL	
1254	7440	SEA	
1255	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.
/TAD TEST 47 /01 MB, CR			
1256	7200	CLA	
1257	7100	CLL	
1260	1045	TAD K2000	/0+2000=2000
1261	1072	TAD K6000	/2000+6000=1 0000
1262	7430	SEL	
1263	7440	SEA	
1264	7402	HLT	/TAD ERROR. LINK SHOULD = 1. AC SHOULD = 0000.
/TAD TEST 48.			
1265	7200	CLA	
1266	7100	CLL	
1267	1067	TAD K7777	/0+7777=7777
1270	1021	TAD K0001	/7777+1=1 0000
1271	7430	SEL	/
1272	7440	SEA	
1273	7402	HLT	/TAD ERROR. LINK SHOULD = 1. AC SHOULD = 0000.
/TAD TEST 49.			
1274	7200	CLA	/101 AC, MB, CR.
1275	7100	CLL	
1276	1023	TAD K3	/0+3=3
1277	1023	TAD K3	/3+3=6
1300	1100	TAD K7770	/6+7770=7776
1301	1021	TAD K0001	/7776+1=7777
1302	7040	CMA	/0

1303	7420	SNL	
1304	7440	SEA	
1305	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.
/TAD TEST 50.			
1306	7200	CLA	/91 AC, MB, CR.
1307	7100	CLL	
1310	1025	TAD K6	/0+6=6
1311	1025	TAD K6	/6+6=14
1312	1077	TAD K7760	/14+7760=7774
1313	1023	TAD K3	/7774+3=7777
1314	7040	CMA	/0
1315	7420	SNL	
1316	7440	SEA	
1317	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.
/TAD TEST 51.			
1320	7200	CLA	/81 AC, MB, CR.
1321	7100	CLL	
1322	1027	TAD K14	/0+14=14
1323	1027	TAD K14	/14+14=30
1324	1076	TAD K7740	/30+7740=7770
1325	1102	TAD K0007	/7770+7=7777
1326	7040	CMA	/0
1327	7420	SNL	
1330	7440	SEA	
1331	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.
/TAD TEST 52.			
1332	7200	CLA	/71 AC, MB, CR.
1333	7100	CLL	
1334	1031	TAD K30	/0+30=30
1335	1031	TAD K30	/30+30=60
1336	1051	TAD K7717	/60+7717=7777
1337	7040	CMA	/0
1340	7420	SNL	
1341	7440	SEA	
1342	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.
/TAD TEST 53.			
1343	7200	CLA	/61 AC, MB, CR.
1344	7100	CLL	
1345	1033	TAD K60	/60+60=120
1346	1033	TAD K60	/120+7600=7720
1347	1075	TAD K7600	/7720+37=7757
1350	1105	TAD K0037	/0
1351	7040	CMA	
1352	7420	SNL	
1353	7440	SEA	
1354	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.
/TAD TEST 54.			
1355	7200	CLA	/51 AC, MB, CR
1356	7100	CLL	

1357	1035	TAD K140	
1360	1035	TAD K140	/140+140=300
1361	1074	TAD K7400	/300+7400=7700
1362	1106	TAD K0277	/7700+77=7777
1363	7040	CMA	/0
1364	7420	SNL	
1365	7440	SEA	
1366	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 55. /41 AC, MB, CR.

1367	7200	CLA	
1370	7100	CLL	
1371	1037	TAD K300	/0+300=300
1372	1037	TAD K300	/300+300=600
1373	1060	TAD K7177	/600+7177=7777
1374	7040	CMA	/0
1375	7420	SNL	
1376	7440	SEA	
1377	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 56. /31 AC, MB, CR.

1400	7200	CLA	
1401	7100	CLL	
1402	1041	TAD K600	/0+600=600
1403	1041	TAD K600	/600+600=1200
1404	1072	TAD K0000	/1200+6000=7200
1405	1110	TAD K0377	/7200+377=7777
1406	7040	CMA	
1407	7420	SNL	
1410	7440	SEA	
1411	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 57. /21 AC, MB, CR.

1412	7200	CLA	
1413	7100	CLL	
1414	1044	TAD K1400	/0+1400=1400
1415	1044	TAD K1400	/1400+1400=3000
1416	1030	TAD K4000	/3000+4000=7000
1417	1111	TAD K0777	/7000+777=7777
1420	7040	CMA	/0
1421	7420	SNL	
1422	7440	SEA	
1423	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 58. /11 AC, MB, CR.

1424	7200	CLA	
1425	7100	CLL	
1426	1046	TAD K3000	/0+3000=3000
1427	1046	TAD K3000	/3000+3000=6000
1430	1112	TAD K1777	/6000+1777=7777
1431	7040	CMA	/0
1432	7420	SNL	
1433	7440	SEA	
1434	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO

/TAD TEST 59. /01 AC, MB, CR.

1435	7200	CLA	
1436	7100	CLL	/
1437	1072	TAD K0000	/0+0000=0000
1440	1072	TAD K0000	/0000+0000=1 0000
1441	1066	TAD K3777	/1 0000+3777=1 7777
1442	7040	CMA	/1 0000
1443	7430	SEL	
1444	7440	SEA	
1445	7402	HLT	/TAD ERROR, LINK SHOULD BE 1. AC SHOULD BE ZERO.

/TAD TEST 60.

1446	7200	CLA	
1447	7100	CLL	
1450	1067	TAD K7777	/0+7777=7777
1451	1067	TAD K7777	/7777+7777=1 7776
1452	1021	TAD K0001	/1 7776+1=1 7777
1453	7040	CMA	/1 0000
1454	7430	SEL	
1455	7440	SEA	
1456	7402	HLT	/TAD ERROR, LINK SHOULD BE 1. AC SHOULD BE ZERO.

/RAR TEST 1

1457	7200	CLA	
1460	7100	CLL	
1461	1021	TAD K0001	/ROTATE PATTERN
1462	7010	RAR	
1463	7420	SNL	
1464	7402	HLT	/RAR FAILED, LINK DROPPED A BIT

/RAR TEST 2

1465	7200	CLA	
1466	7100	CLL	
1467	1020	TAD K0000	/ROTATE PATTERN
1470	7010	RAR	
1471	7440	SEA	
1472	7402	HLT	/RAR FAILED, AC PICKED UP A BIT

/RAR TEST 3

1473	7200	CLA	
1474	7100	CLL	
1475	1020	TAD K0000	/ROTATE PATTERN
1476	7010	RAR	
1477	7430	SEL	
1500	7402	HLT	/RAL FAILED, LINK PICKED UP A BIT

/RAR TEST 4

1501	7200	CLA	
1502	7100	CLL	
1503	7020	CHL	
1504	1020	TAD K0000	/ROTATE PATTERN

1505	7010	RAR	
1506	7430	SEL	
1507	7402	HLT	/RAR LINK PICKED UP A BIT /LINK SHOULD EQUAL ZERO
/RAR TEST 5			
1510	7200	CLA	
1511	7100	CLL	
1512	7020	CML	
1513	1067	TAD K7777	/ROTATE PATTERN
1514	7010	RAR	
1515	7040	CMA	
1516	7440	SNA	
1517	7402	HLT	/RAR FAILED AC DROPPED A BIT /A ONE IN AC EQUALS THE DROPPED BIT
/RAR TEST 6			
1520	7200	CLA	
1521	7100	CLL	
1522	7020	CML	
1523	1020	TAD K0000	/ROTATE PATTERN
1524	7010	RAR	
1525	1066	TAD K3777	
1526	7040	CMA	
1527	7430	SNA	
1530	7430	SEL	
1531	7402	HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000
/RAR TEST 7			
1532	7200	CLA	
1533	7100	CLL	
1534	1050	TAD K4000	/ROTATE PATTERN
1535	7010	RAR	
1536	1065	TAD K5777	
1537	7040	CMA	
1540	7430	SNA	
1541	7430	SEL	
1542	7402	HLT	/RAR FAILED AC AND LINK SHOULD /EQUAL 0000
/RAR TEST 8			
1543	7200	CLA	
1544	7100	CLL	
1545	1045	TAD K2000	/ROTATE PATTERN
1546	7010	RAR	
1547	1064	TAD K6777	
1550	7040	CMA	
1551	7430	SNA	
1552	7430	SEL	
1553	7402	HLT	/RAR FAILED AC AND LINK SHOULD /EQUAL 0000
/RAR TEST 9			
1554	7200	CLA	
1555	7100	CLL	
1556	1042	TAD K1000	/ROTATE PATTERN

1557	7010	RAR	
1560	1043	TAD K7377	
1561	7040	CMA	
1562	7430	SNA	
1563	7430	SEL	
1564	7402	HLT	/RAR FAILED AC AND LINK SHOULD /EQUAL 0000
/RAR TEST 10			
1565	7200	CLA	
1566	7100	CLL	
1567	1040	TAD K0400	/ROTATE PATTERN
1570	7010	RAR	
1571	1062	TAD K7577	
1572	7040	CMA	
1573	7430	SNA	
1574	7430	SEL	
1575	7402	HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000
/RAR TEST 11			
1576	7200	CLA	
1577	7100	CLL	
1600	1036	TAD K0200	/ROTATE PATTERN
1601	7010	RAR	
1602	1061	TAD K7677	
1603	7040	CMA	
1604	7430	SNA	
1605	7430	SEL	
1606	7402	HLT	/RAR FAILED AC AND LINK /EQUAL 0000
/RAR TEST 12			
1607	7200	CLA	
1610	7100	CLL	
1611	1034	TAD K0100	/ROTATE PATTERN
1612	7010	RAR	
1613	1057	TAD K7737	
1614	7040	CMA	
1615	7430	SNA	
1616	7430	SEL	
1617	7402	HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000
/RAR TEST 13			
1620	7200	CLA	
1621	7100	CLL	
1622	1032	TAD K0040	/ROTATE PATTERN
1623	7010	RAR	
1624	1056	TAD K7757	
1625	7040	CMA	
1626	7430	SNA	
1627	7430	SEL	
1630	7402	HLT	/RAR FAILED AC AND LINK

PAUSE

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/INSTRUCTION TEST 1
/TAPE 2
/RAR TEST 14
1631 7200 CLA
1632 7100 CLL
1633 1030 TAD K0020 /ROTATE PATTERN
1634 7010 RAR
1635 1055 TAD K7767
1636 7040 CMA
1637 7430 SNA
1640 7430 SNL
1641 7402 HLT /RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 15
1642 7200 CLA
1643 7100 CLL
1644 1026 TAD K0010 /ROTATE PATTERN
1645 7010 RAR
1646 1054 TAD K7773
1647 7040 CMA
1650 7430 SNA
1651 7430 SNL
1652 7402 HLT /RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 16
1653 7200 CLA
1654 7100 CLL
1655 1024 TAD K0004 /ROTATE PATTERN
1656 7010 RAR
1657 1053 TAD K7775
1658 7040 CMA
1661 7430 SNA
1662 7430 SNL
1663 7402 HLT /RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 17
1664 7200 CLA
1665 7100 CLL
1666 1022 TAD K0002 /ROTATE PATTERN
1667 7010 RAR
1670 1052 TAD K7776
1671 7040 CMA
1672 7430 SNA
1673 7430 SNL
1674 7402 HLT /RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

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/RAR TEST 18
1675 7200 CLA
1676 7100 CLL
1677 1021 TAD K0001 /ROTATE PATTERN
1680 7010 RAR
1681 1067 TAD K7777
1682 7040 CMA
1683 7430 SNA
1684 7420 SNL
1685 7402 HLT /RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 1
1686 7200 CLA
1687 7100 CLL
1690 1022 TAD K0002 /ROTATE PATTERN
1691 7012 RTR
1692 7420 SNL
1693 7402 HLT /RTR FAILED LINK DROPPED
/A BIT LINK SHOULD EQUAL A ONE

/RTR TEST 2
1694 7200 CLA
1695 7100 CLL
1696 1020 TAD K0000 /ROTATE PATTERN
1697 7012 RTR
1698 7440 SNA
1699 7402 HLT /RTR FAILED AC PICKED UP A BIT
/A ONE IN AC EQUALS THE PICKED UP BIT

/RTR TEST 3
1700 7200 CLA
1701 7100 CLL
1702 1020 TAD K0000 /ROTATE PATTERN
1703 7012 RTR
1704 7430 SNL
1705 7402 HLT /RTR LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

/RTR TEST 4
1706 7200 CLA
1707 7100 CLL
1708 7020 CML
1709 1020 TAD K0000 /ROTATE PATTERN
1710 7012 RTR
1711 7430 SNL
1712 7402 HLT /RTR LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

/RTR TEST 5
1713 7200 CLA
1714 7100 CLL
1715 7020 CML
1716 1067 TAD K7777 /ROTATE PATTERN
1717 7012 RTR
1718 7040 CMA
1719 7440 SNA

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1746	7402	HLT	/RTR AC DROPPED A BIT A ONE IN /AC EQUALS THE DROPPED BIT
/RTR TEST 6			
1747	7200	CLA	
1750	7100	CLL	
1751	7020	CML	
1752	1020	TAD K0000	/ROTATE PATTERN
1753	7012	RTR	
1754	1005	TAD K5777	
1755	7040	CMA	
1756	7490	SNA	
1757	7430	SZL	
1760	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000
/RTR TEST 7			
1761	7200	CLA	
1762	7100	CLL	
1763	1050	TAD K4000	/ROTATE PATTERN
1764	7012	RTR	
1765	1064	TAD K6777	
1766	7040	CMA	
1767	7490	SNA	
1770	7430	SZL	
1771	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000
/RTR TEST 8			
1772	7200	CLA	
1773	7100	CLL	
1774	1045	TAD K2000	/ROTATE PATTERN
1775	7012	RTR	
1776	1063	TAD K7377	
1777	7040	CMA	
2000	7490	SNA	
2001	7430	SZL	
2002	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000
/RTR TEST 9			
2003	7200	CLA	
2004	7100	CLL	
2005	1042	TAD K1000	/ROTATE PATTERN
2006	7012	RTR	
2007	1042	TAD K7577	
2010	7040	CMA	
2011	7490	SNA	
2012	7430	SZL	
2013	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000
/RTR TEST 10			
2014	7200	CLA	
2015	7100	CLL	
2016	1040	TAD K0400	/ROTAATE PATTERN
2017	7012	RTR	
2020	1061	TAD K7677	

2021	7040	CMA	
2022	7490	SNA	
2023	7430	SZL	
2024	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000
/RTR TEST 11			
2025	7200	CLA	
2026	7100	CLL	
2027	1036	TAD K0200	/ROTATE PATTERN
2030	7012	RTR	
2031	1057	TAD K7737	
2032	7040	CMA	
2033	7490	SNA	
2034	7430	SZL	
2035	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000
/RTR TEST 12			
2036	7200	CLA	
2037	7100	CLL	
2040	1034	TAD K0100	/ROTATE PATTERN
2041	7012	RTR	
2042	1056	TAD K7757	
2043	7040	CMA	
2044	7490	SNA	
2045	7430	SZL	
2046	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000
/RTR TEST 13			
2047	7200	CLA	
2050	7100	CLL	
2051	1032	TAD K0040	/ROTATE PATTERN
2052	7012	RTR	
2053	1055	TAD K7767	
2054	7040	CMA	
2055	7490	SNA	
2056	7430	SZL	
2057	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000
/RTR TEST 14			
2060	7200	CLA	
2061	7100	CLL	
2062	1030	TAD K0020	/ROTATE PATTERN
2063	7012	RTR	
2064	1054	TAD K7773	
2065	7040	CMA	
2066	7490	SNA	
2067	7430	SZL	
2070	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000
/RTR TEST 15			
2071	7200	CLA	
2072	7100	CLL	
2073	1026	TAD K0010	/ROTATE PATTERN

2074 7012 RTR
2075 1053 TAD K7775
2076 7040 CMA
2077 7450 SNA
2100 7430 SEL
2101 7402 HLT

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 16

2102 7300 CLA CLL
2103 1024 TAD K0004
2104 7012 RTR
2105 1052 TAD K7776
2106 7040 CMA
2107 7450 SNA
2110 7430 SEL
2111 7402 HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 17

2112 7200 CLA
2113 7100 CLL
2114 1022 TAD K0002
2115 7012 RTR
2116 7450 SNA
2117 7420 SNL
2120 7402 HLT

/ROTATE PATTERN

/RTR FAILED. AC SHOULD EQUAL
/0000, LINK SHOULD EQUAL ONE

/RTR TEST 18

2121 7200 CLA
2122 7100 CLL
2123 1021 TAD K0001
2124 7012 RTR
2125 1066 TAD K3777
2126 7040 CMA
2127 7450 SNA
2130 7430 SEL
2131 7402 HLT

/ROTATE PATTERN

/RTR FAILED. AC AND LINK
/SHOULD BE ZERO

/RAL TEST 1

2132 7200 CLA
2133 7100 CLL
2134 1050 TAD K4000
2135 7004 RAL
2136 7430 SEL
2137 7440 SEA
2140 7402 HLT

/ROTATE PATTERN

/RAL FAILED. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE.

/RAL TEST 2

2141 7200 CLA
2142 7100 CLL
2143 1020 TAD K0000
2144 7004 RAL
2145 7420 SNL
2146 7440 SEA

/ROTATE PATTERN

2147 7402 HLT

/RAL FAILED. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/RAL TEST 3

2150 7200 CLA
2151 7100 CLL
2152 7020 CML
2153 1020 TAD K0000
2154 7004 RAL
2155 7430 SEL
2156 7402 HLT

/ROTATE PATTERN. LINK=1

/RAL FAILURE. AC SHOULD EQUAL 0001
/LINK SHOULD EQUAL ZERO

/RAL TEST 4

2157 7200 CLA
2158 7100 CLL
2159 7020 CML
2160 1067 TAD K7777
2161 7004 RAL
2162 7040 CMA
2163 7440 SEA
2164 7402 HLT

/ROTATE PATTERN. LINK=1

/RAL FAILURE. LINK SHOULD EQUAL ONE
/AC SHOULD EQUAL 0000

/RAL TEST 5

2167 7200 CLA
2170 7100 CLL
2171 1045 TAD K2000
2172 7004 RAL
2173 1066 TAD K3777
2174 7040 CMA
2175 7450 SNA
2176 7430 SEL
2177 7402 HLT

/ROTATE PATTERN

/RAL FAILURE. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE

/RAL TEST 6

2200 7200 CLA
2201 7100 CLL
2202 1042 TAD K1000
2203 7004 RAL
2204 1065 TAD K3777
2205 7040 CMA
2206 7440 SEA
2207 7402 HLT

/ROTATE PATTERN

/RAL FAILURE. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/RAL TEST 7

2210 7200 CLA
2211 7100 CLL
2212 1040 TAD K0400
2213 7004 RAL
2214 1064 TAD K6777
2215 7040 CMA
2216 7450 SNA
2217 7430 SEL

/ROTATE PATTERN

2220	7402	HLT	/RAL FAILURE. AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ZERO
/RAL TEST 8			
2221	7200	CLA	
2222	7100	CLL	
2223	1036	TAD K0200	/ROTATE PATTERN
2224	7004	RAL	
2225	1063	TAD K7377	
2226	7040	CMA	
2227	7450	SNA	
2230	7430	SEL	/RAL FAILURE AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ZERO
2231	7402	HLT	
/RAL TEST 9			
2232	7200	CLA	
2233	7100	CLL	
2234	1034	TAD K0100	/ROTATE PATTERN
2235	7004	RAL	
2236	1062	TAD K7977	
2237	7040	CMA	
2240	7450	SNA	
2241	7430	SEL	/RAL FAILURE AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ZERO
2242	7402	HLT	
/RAL TEST 10			
2243	7200	CLA	
2244	7100	CLL	
2245	1032	TAD K0040	/ROTATE PATTERN
2246	7004	RAL	
2247	1061	TAD K7677	
2250	7040	CMA	
2251	7450	SNA	
2252	7430	SEL	/RAL FAILURE AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL A ZERO
2253	7402	HLT	
/RAL TEST 11			
2254	7200	CLA	
2255	7100	CLL	
2256	1030	TAD K0020	/ROTATE PATTERN
2257	7004	RAL	
2260	1057	TAD K7737	
2261	7040	CMA	
2262	7450	SNA	
2263	7430	SEL	/RAL FAILURE AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL A ZERO
2264	7402	HLT	
/RAL TEST 12			
2265	7200	CLA	
2266	7100	CLL	
2267	1026	TAD K0010	/ROTATE PATTERN
2270	7004	RAL	
2271	1056	TAD K7797	
2272	7040	CMA	
2273	7450	SNA	
2274	7430	SEL	/RAL FAILURE AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL A ZERO
2275	7402	HLT	

/RAL TEST 13			
2276	7200	CLA	
2277	7100	CLL	
2300	1024	TAD K0004	/ROTATE PATTERN
2301	7004	RAL	
2302	1055	TAD K7767	
2303	7040	CMA	
2304	7450	SNA	
2305	7430	SEL	/RAL FAILED AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL A ZERO
2306	7402	HLT	
/RAL TEST 14			
2307	7200	CLA	
2310	7100	CLL	
2311	1022	TAD K0002	/ROTATE PATTERN
2312	7004	RAL	
2313	1054	TAD K7773	
2314	7040	CMA	
2315	7450	SNA	
2316	7430	SEL	/RAL FAILED AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL A ZERO
2317	7402	HLT	
/RAL TEST 15			
2320	7200	CLA	
2321	7100	CLL	
2322	1021	TAD K0001	/ROTATE PATTERN
2323	7004	RAL	
2324	1053	TAD K7775	
2325	7040	CMA	
2326	7450	SNA	
2327	7430	SEL	/RAL FAILED AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ZERO
2330	7402	HLT	
/RAL TEST 16			
2331	7200	CLA	
2332	7100	CLL	
2333	7020	CML	
2334	7004	RAL	
2335	1052	TAD K7776	
2336	7040	CMA	
2337	7450	SNA	
2340	7430	SEL	/RAL FAILED AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ZERO
2341	7402	HLT	
/RTL TEST 1			
2342	7200	CLA	
2343	7100	CLL	
2344	1045	TAD K2000	
2345	7006	RTL	
2346	7420	SNL	
2347	7402	HLT	/RTL LINK DROPPED A BIT /LINK SHOULD EQUAL A ONE
/RTL TEST 2			
2350	7200	CLA	

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2351 7100      CLL
2352 1020      TAD K0000      /ROTATE PATTERN
2353 7006      RTL
2354 7440      SEA
2355 7402      HLT      /RTL AC PICKED UP A BIT
                        /A ONE IN AC EQUALS THE PICKED UP

/RTL TEST 3
2356 7200      CLA
2357 7100      CLL
2358 1020      TAD K0000      /ROTATE PATTERN
2359 7006      RTL
2360 7430      SEL
2361 7402      HLT      /RTL LINK PICKED UP A BIT
                        /LINK SHOULD EQUAL ZERO

/RTL TEST 4
2364 7200      CLA
2365 7100      CLL
2366 7020      CML
2367 1020      TAD K0000      /ROTATE PATTERN
2368 7006      RTL
2369 7430      SEL
2370 7402      HLT      /RTL FAILURE. LINK PICKED UP A BIT
                        /LINK SHOULD EQUAL A ZERO

/RTL TEST 5
2373 7200      CLA
2374 7100      CLL
2375 7020      CML
2376 1067      TAD K7777      /ROTATE PATTERN
2377 7006      RTL
2378 7040      CMA
2379 7440      SEA
2380 7402      HLT      /RTL FAILURE. DROPPED A BIT

/RTL TEST 6
2403 7200      CLA
2404 7100      CLL
2405 1050      TAD K4000      /ROTATE PATTERN
2406 7006      RTL
2407 1092      TAD K7776
2408 7040      CMA
2409 7450      SNA
2410 7430      SEL
2411 7402      HLT      /RTL FAILED AC AND LINK SHOULD EQUAL 0000

/RTL TEST 7
2414 7200      CLA
2415 7100      CLL
2416 1045      TAD K2000      /ROTATE PATTERN
2417 7006      RTL
2418 7450      SNA
2419 7430      BNL
2420 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

/RTL TEST 8
2423 7200      CLA

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2424 7100      CLL
2425 1042      TAD K1000      /ROTATE PATTERN
2426 7006      RTL
2427 1066      TAD K3777
2428 7040      CMA
2429 7450      SNA
2430 7430      SEL
2431 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

/RTL TEST 9
2434 7200      CLA
2435 7100      CLL
2436 1040      TAD K0400      /ROTATE PATTERN
2437 7006      RTL
2438 1065      TAD K5777
2439 7040      CMA
2440 7450      SNA
2441 7430      SEL
2442 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL ZERO

/RTL TEST 10
2445 7200      CLA
2446 7100      CLL
2447 1036      TAD K0200      /ROTATE PATTERN
2448 7006      RTL
2449 1064      TAD K6777
2450 7040      CMA
2451 7450      SNA
2452 7430      SEL
2453 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

/RTL TEST 11
2456 7200      CLA
2457 7100      CLL
2458 1034      TAD K0100      /ROTATE PATTERN
2459 7006      RTL
2460 1063      TAD K7377
2461 7040      CMA
2462 7450      SNA
2463 7430      SEL
2464 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

/RTL TEST 12
2467 7200      CLA
2468 7100      CLL
2469 1032      TAD K0040      /ROTATE PATTERN
2470 7006      RTL
2471 1062      TAD K7577
2472 7040      CMA
2473 7450      SNA
2474 7430      SEL
2475 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

```



```

/RTL TEST 13
2500 7200 CLA
2501 7100 CLL
2502 1030 TAD K0020 /ROTATE PATTERN
2503 7006 RTL
2504 1061 TAD K7677
2505 7040 CMA
2506 7450 SNA
2507 7430 SEL
2510 7402 HLT /RTL FAILED AC AND LINK SHOULD
/EQUAL 0000

```

```

/RTL TEST 14
2511 7200 CLA
2512 7100 CLL
2513 1026 TAD K0010 /ROTATE PATTERN
2514 7006 RTL
2515 1057 TAD K7737
2516 7040 CMA
2517 7450 SNA
2520 7430 SEL
2521 7402 HLT /RTL FAILED AC AND LINK SHOULD

```

```

/RTL TEST 15
2522 7200 CLA
2523 7100 CLL
2524 1024 TAD K0004 /ROTATE PATTERN
2525 7006 RTL
2526 1056 TAD K7797
2527 7040 CMA
2530 7450 SNA
2531 7430 SEL
2532 7402 HLT /RTL FAILED AC AND LINK SHOULD
/EQUAL 0000

```

```

/RTL TEST 16
2533 7200 CLA
2534 7100 CLL
2535 1022 TAD K0002 /ROTATE PATTERN
2536 7006 RTL
2537 1055 TAD K7767
2540 7040 CMA
2541 7450 SNA
2542 7430 SEL
2543 7402 HLT /RTL FAILED AC AND LINK
/SHOULD EQUAL 0000

```

```

/RTL TEST 17
2544 7200 CLA
2545 7100 CLL
2546 1021 TAD K0001 /ROTATE PATTERN
2547 7006 RTL
2550 1054 TAD K7773
2551 7040 CMA
2552 7450 SNA

```

```

2553 7430 SEL
2554 7402 HLT /RTL FAILED AC AND LINK
/SHOULD EQUAL 0000

```

```

/RTL TEST 18
2555 7200 CLA
2556 7100 CLL
2557 7020 CML
2560 7006 RTL
2561 1053 TAD K7775
2562 7040 CMA
2563 7450 SNA
2564 7430 SEL
2565 7402 HLT /RTL FAILED AC AND LINK
/SHOULD EQUAL 0000

```

```

/BSW TEST 1
2566 7200 CLA
2567 7100 CLL
2570 7040 CMA /AC=7777
2571 7002 BSW /SWAP BYTES AC SHOULD EQUAL 7777
2572 7040 CMA
2573 7420 SNL /DID LINK SET?
2574 7440 SZA
2575 7402 HLT /BSW FAILED
/AC AND LINK SHOULD=0000

```

```

/BSW TEST 2
2576 7200 CLA
2577 7100 CLL
2600 7020 CML /LINK=1
2601 7002 BSW /SWAP BYTES AC SHOULD EQUAL 0000
2602 7450 SNA
2603 7420 SNL
2604 7402 HLT /BSW CAUSED THE LINK
/TO ROTATE

```

```

/BSW TEST 3
2605 7200 CLA
2606 7100 CLL
2607 1113 TAD K7700 /AC=7700
2610 7002 BSW /SWAP BYTES AC SHOULD EQUAL 0077
2611 1113 TAD K7700 /AC=7777
2612 7040 CMA /AC=0000
2613 7420 SNL
2614 7440 SZA
2615 7402 HLT /BSW FAILED AC AND LINK
/SHOULD=0000

```

```

/BSW TEST 4
2616 7200 CLA
2617 7100 CLL
2620 1106 TAD K0077 /AC=0077
2621 7002 BSW /SWAP BYTES AC SHOULD EQUAL 7700
2622 1106 TAD K0077 /AC=7777
2623 7040 CMA
2624 7420 SNL
2625 7440 SZA

```

2626	7402	HLT	/BSW FAILED AC AND LINK /SHOULD=0000
/BSW TEST 5			
2627	7300	CLA CLL	
2630	1116	TAD K0770	
2631	7002	BSW	/SWAP BYTES AC SHOULD EQUAL 7007
2632	1116	TAD K0770	
2633	7040	CMA	
2634	7420	SNL	
2635	7440	SEA	
2636	7402	HLT	/BSW FAILED AC AND LINK /SHOULD EQUAL 0000
/BSW TEST 6			
2637	7320	CLA CLL CML	
2640	1117	TAD K7007	
2641	7002	BSW	/SWAP BYTES AC SHOULD EQUAL 0770
2642	1117	TAD K7007	
2643	7040	CMA	
2644	7430	SEL	
2645	7440	SEA	
2646	7402	HLT	/BSW FAILED AC /SHOULD EQUAL 0000 AND LINK=1
/BSW TEST 7			
2647	7200	CLA	
2650	7100	CLL	
2651	1114	TAD K5225	/AC=5225
2652	7002	BSW	/SWAP BYTES AC SHOULD EQUAL 2552
2653	1114	TAD K5225	/AC=7777
2654	7040	CMA	
2655	7420	SNL	
2656	7440	SEA	
2657	7402	HLT	/BSW FAILED AC AND LINK /SHOULD=0000
/BSW TEST 8			
2660	7200	CLA	
2661	7100	CLL	
2662	1115	TAD K2552	/AC=2552
2663	7002	BSW	/SWAP BYTES AC SHOULD EQUAL 5225
2664	1115	TAD K2552	/AC=7777
2665	7040	CMA	
2666	7420	SNL	
2667	7440	SEA	
2670	7402	HLT	/BSW FAILED AC AND LINK /SHOULD=0000

/GROUP 1 OPERATE TEST 1			
2671	7200	CLA	/CLEAR AC
2672	7100	CLL	/CLEAR LINK
2673	7040	CMA	/AC EQUALS 7777
2674	7020	CML	/LINK EQUALS ONE
2675	7300	CLA CLL	/TEST COMBINATION
2676	7420	SNL	
2677	7440	SEA	
2700	7402	HLT	/CLA CLL FAILED, LINK SHOULD BE 0

/GROUP 1 OPERATE TEST 2			
2701	7200	CLA	/AC SHOULD EQUAL 0000
2702	1071	TAD K2525	/AC EQUALS 0000
2703	7240	CLA CMA	/AC EQUALS 2525
2704	7040	CMA	/TEST COMBINATION
2705	7440	SEA	
2706	7402	HLT	/CLA CMA ERROR, AC SHOULD /BE 0000
/GROUP 1 OPERATE TEST 3			
2707	7200	CLA	
2710	7100	CLL	
2711	7040	CMA	/AC=7777 LINK=1
2712	7140	CLL CMA	/TEST COMBINATION
2713	7420	SNL	
2714	7440	SEA	
2715	7402	HLT	/CLL CMA FAILED, AC AND LINK /SHOULD BE ZERO
/GROUP 1 OPERATE TEST 4			
2716	7100	CLL	
2717	7020	CML	/LINK=1
2720	7200	CLA	
2721	7040	CMA	/AC=7777
2722	7340	CLA CMA CLL	/TEST COMBINATION
2723	7040	CMA	
2724	7420	SNL	
2725	7440	SEA	
2726	7402	HLT	/CLA CMA CLL FAILED, AC AND /LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 5			
2727	7200	CLA	
2730	7100	CLL	/LINK=0
2731	7040	CMA	/AC=7777
2732	7220	CLA CML	/TEST COMBINATION
2733	7430	SEL	
2734	7440	SEA	
2735	7402	HLT	/CLA CML FAILED, AC SHOULD EQUAL /0000, LINK SHOULD BE A ONE
/GROUP 1 OPERATE TEST 6			
2736	7100	CLL	
2737	7020	CML	/LINK=1
2740	7120	CLL CML	/TEST COMBINATION
2741	7420	SNL	
2742	7402	HLT	/CLL CML FAILED /LINK SHOULD BE A ONE
/GROUP 1 OPERATE TEST 7			
2743	7100	CLL	/LINK=0
2744	7120	CLL CML	/TEST COMBINATION
2745	7420	SNL	
2746	7402	HLT	/CLL CML FAILED, /LINK SHOULD BE A ONE
/GROUP 1 OPERATE TEST 8			
2747	7120	CLL CML	/LINK=1


```

2750 7240      CLA CMA      /AC=7777
2751 7320      CLA CLL CML  /TEST COMBINATION
2752 7430      SEL
2753 7440      SEA
2754 7402      HLT          /CLA CLL CML FAILED. LINK SHOULD
                          /BE 1, AC SHOULD BE ZERO

/GROUP 1 OPERATE TEST 9
2755 7340      CLA CLL CMA  /LINK=0, AC=7777
2756 7320      CLA CLL CML  /TEST COMBINATION
2757 7430      SEL
2760 7440      SEA
2761 7402      HLT          /CLA CLL CML FAILED. LINK SHOULD
                          /BE 1, AC SHOULD BE ZERO

/GROUP 1 OPERATE TEST 10
2762 7340      CLA CLL CMA  /AC=7777, LINK=0
2763 7060      CMA CML      /TEST COMBINATION
2764 7430      SEL
2765 7440      SEA
2766 7402      HLT          /CMA CML FAILED. AC SHOULD BE
                          /0000 LINK SHOULD EQUAL ONE.

/GROUP 1 OPERATE TEST 11
2767 7300      CLA CLL      /AC AND LINK=0
2770 1071      TAD K2525     /AC=2525
2771 7340      CLA CMA CLL   /TEST COMBINATION
2772 7040      CMA
2773 7420      SNL
2774 7440      SEA
2775 7402      HLT          /CLA CMA CML FAILED. AC SHOULD BE
                          /0000, LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 12
2776 7300      CLL CLA      /AC AND LINK=0
2777 1071      TAD K2525     /AC=2525
3000 7160      CLL CMA CML   /TEST COMBINATION
3001 1071      TAD K2525
3002 7040      CMA
3003 7430      SEL
3004 7440      SEA
3005 7402      HLT          /CLL CMA CML FAILED. AC SHOULD BE
                          /0000. LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 13
3006 7300      CLA CLL      /AC=0000, LINK=1
3007 7020      CML          /TEST COMBINATION
3010 7160      CLL CMA CML
3011 7040      CMA
3012 7430      SEL
3013 7440      SEA
3014 7402      HLT          /CLL CMA CML FAILED. AC SHOULD
                          /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 14
3015 7300      CLA CLL
3016 1071      TAD K2525     /AC=2525, LINK=0

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3017 7360      CLA CLL CMA CML /TEST COMBINATION
3020 7040      CMA
3021 7430      SEL
3022 7440      SEA
3023 7402      HLT          /CLA CLL CMA CML FAILED. AC SHOULD
                          /BE 0000 LINK SHOULD EQUAL ONE.

/GROUP 1 OPERATE TEST 15
3024 7320      CLA CLL CML   /AC=5252, LINK=1
3025 1070      TAD K2525     /TEST COMBINATION
3026 7360      CLA CLL CMA CML
3027 7040      CMA
3030 7430      SEL
3031 7440      SEA
3032 7402      HLT          /CLA CLL CMA CML FAILED. AC SHOULD
                          /BE 000. LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 16
3033 7200      CLA
3034 1071      TAD K2525     /AC=2525
3035 7201      CLA IAC       /TEST COMBINATION
3036 1052      TAD K7776
3037 7040      CMA
3040 7440      SEA
3041 7402      HLT          /CLA IAC FAILED
                          /AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 17
3042 7320      CLL CML CLA   /AC=7776, LINK=1
3043 1052      TAD K7776     /TEST COMBINATION
3044 7101      CLL IAC
3045 7040      CMA
3046 7420      SNL
3047 7440      SEA
3050 7402      HLT          /CLL IAC FAILED. AC AND LINK
                          /SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 18
3051 7320      CLA CLL CML   /AC=2525 LINK=1
3052 1071      TAD K2525     /TEST COMBINATION
3053 7301      CLA CLL IAC
3054 1052      TAD K7776
3055 7040      CMA
3056 7420      SNL
3057 7440      SEA
3060 7402      HLT          /CLA CLL IAC FAILED. AC AND LINK
                          /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 19
3061 7300      CLA CLL      /AC=0 LINK=0
3062 7041      CMA IAC       /TEST COMBINATION
3063 7430      SEL
3064 7440      SEA
3065 7402      HLT          /CMA IAC FAILED. AC SHOULD EQUAL
                          /0000. LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 20
3066 7300      CLA CLL
3067 1071      TAD K2525     /AC=2525 LINK=0

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3070 7241      CLA CMA IAC      /TEST COMBINATION
3071 7430      SEL
3072 7440      SEA
3073 7402      HLT              /CLA CMA IAC FAILED. AC SHOULD
                                /EQUAL 0000. LINK SHOULD BE ONE.

/GROUP 1 OPERATE TEST 21
3074 7320      CLL CLA CML      /AC=0000 LINK=1
3075 1021      TAD K0001        /AC=0001
3076 7141      CLL CMA IAC      /TEST COMBINATION
3077 7040      CMA
3100 7420      SNL
3101 7440      SEA
3102 7402      HLT              /CLL CMA IAC FAILED. AC SHOULD BE
                                /0000 LINK SHOULD BE 0

/GROUP 1 OPERATE TEST 22
3103 7320      CLA CLL CML      /AC=2525 LINK=1
3104 1071      TAD K2525
3105 7341      CLA CLL CMA IAC /TEST COMBINATION
3106 7430      SEL
3107 7440      SEA
3110 7402      HLT              /CLA CLL CMA IAC FAILED. AC SHOULD BE
                                /0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 23
3111 7300      CLA CLL
3112 1070      TAD K9252        /AC=5252 LINK=0
3113 7341      CLA CLL CMA IAC /TEST COMBINATION
3114 7430      SEL
3115 7440      SEA
3116 7402      HLT              /CLA CLL CMA IAC FAILED AC SHOULD
                                /BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 24
3117 7300      CLA CLL
3120 1052      TAD K7776        /AC=7776 LINK=0
3121 7021      CML IAC          /TEST COMBINATION
3122 7040      CMA
3123 7430      SEL
3124 7440      SEA
3125 7402      HLT              /CML IAC FAILED AC SHOULD BE
                                /0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 25
3126 7320      CLA CLL CML      /AC =7776 LINK=1
3127 1052      TAD K7776
3130 7021      CML IAC          /TEST COMBINATION
3131 7040      CMA
3132 7400      SNL
3133 7440      SEA
3134 7402      HLT              /CML IAC FAILED. AC SHOULD BE
                                /0000. LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 26
3135 7300      CLA CLL
3136 1071      TAD K2525        /AC=2525 LINK=0
3137 7221      CLA CML IAC      /TEST COMBINATION
3140 1052      TAD K7776

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3141 7040      CMA
3142 7430      SEL
3143 7440      SEA
3144 7402      HLT              /CLA CML IAC FAILED. AC SHOULD BE
                                /0000. LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 27
3145 7320      CLA CLL CML      /AC=0000 LINK=1
3146 1052      TAD K7776        /AC=7776
3147 7121      CLL CML IAC      /TEST COMBINATION
3150 7040      CMA
3151 7430      SEL
3152 7440      SEA
3153 7402      HLT              /CLL CML IAC FAILURE. AC SHOULD BE
                                /0000. LINK SHOULD EQUAL ONE.

/GROUP 1 OPERATE TEST 28
3154 7300      CLA CLL
3155 1052      TAD K7776        /AC=7776 LINK=0
3156 7121      CLL CML IAC      /TEST COMBINATION
3157 7040      CMA
3158 7430      SEL
3159 7440      SEA
3162 7402      HLT              /CLL CML IAC FAILED. AC SHOULD
                                /BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 29
3163 7300      CLA CLL
3164 1071      TAD K2525        /AC=2525. LINK=0
3165 7321      CLA CLL CML IAC /TEST COMBINATION
3166 1052      TAD K7776
3167 7040      CMA
3170 7430      SEL
3171 7440      SEA
3172 7402      HLT              /CLA CLL CML IAC FAILED. AC SHOULD
                                /BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 30
3173 7320      CLA CLL CML      /AC=2525 LINK=1
3174 1071      TAD K2525
3175 7321      CLA CLL CML IAC /TEST COMBINATION
3176 1052      TAD K7776
3177 7040      CMA
3200 7430      SEL
3201 7440      SEA
3202 7402      HLT              /CLA CLL CML IAC FAILED. AC SHOULD
                                /BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 31
3203 7300      CLA CLL
3204 1021      TAD K0001        /AC=0001 LINK=0
3205 7061      CMA CML IAC      /TEST COMBINATION
3206 7040      CMA
3207 7430      SEL
3210 7440      SEA
3211 7402      HLT              /CMA CML IAC FAILED. AC SHOULD

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/BE 0000, LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 32
3212 7320 CLA CLL CML
3213 1021 TAD K0001 /AC=0001 LINK=1
3214 7061 CMA CML IAC /TEST COMBINATION
3215 7040 CMA
3216 7420 SNL
3217 7440 SEA
3220 7402 HLT /CMA CML IAC FAILED, AC SHOULD BE
/0000, LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 33
3221 7300 CLA CLL /AC=0000 LINK=0
3222 1071 TAD K2525 /AC=2525
3223 7261 CLA CMA CML IAC /TEST COMBINATION
3224 7420 SNL
3225 7430 SEL
3226 7402 HLT /CLA CMA CML IAC FAILED, AC SHOULD
/BE 0000, LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 34
3227 7320 CLA CLL CML
3230 1071 TAD K2525 /AC=2525 LINK=1
3231 7261 CLA CMA CML IAC /TEST COMBINATION
3232 7430 SEL
3233 7440 SEA
3234 7402 HLT /CLA CMA CML IAC FAILED, AC SHOULD
/BE 0000, LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 35
3235 7300 CLA CLL
3236 1021 TAD K0001 /AC=0001 LINK=0
3237 7161 CLL CMA CML IAC /TEST COMBINATION
3240 7040 CMA
3241 7430 SEL
3242 7440 SEA
3243 7402 HLT /CLL CMA CML IAC FAILED, AC SHOULD BE
/0000, LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 36
3244 7320 CLA CLL CML
3245 1021 TAD K0001 /AC=0001 LINK=1
3246 7161 CLL CMA CML IAC /TEST COMBINATION
3247 7040 CMA
3250 7430 SEL
3251 7440 SEA
3252 7402 HLT /CLL CMA CML IAC FAILED, AC SHOULD BE
/0000, LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 37
3253 7300 CLA CLL
3254 1071 TAD K2525 /AC=2525 LINK=0
3255 7361 CLA CLL CMA CML IAC /TEST COMBINATION
3256 7420 SNL
3257 7440 SEA
3260 7402 HLT /CLA CLL CMA CML IAC FAILURE AC AND
/LINK SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 38

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3261 7360 CLA CMA CLL CML /AC=7777 LINK=1
3262 7210 CLA RAR /TEST COMBINATION
3263 1066 TAD K3777
3264 7040 CMA
3265 7420 SNL
3266 7440 SEA
3267 7402 HLT /CLA RAR FAILED, LINK AND
/AC SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 39
3270 7360 CLA CMA CLL CML /AC=7777 LINK=1
3271 7204 CLA RAL /TEST COMBINATION
3272 1052 TAD K7776
3273 7040 CMA
3274 7420 SNL
3275 7440 SEA
3276 7402 HLT /CLA RAL FAILED LINK AND
/AC SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 40
3277 7360 CLA CMA CLL CML /AC=7777 LINK =1
3300 7212 CLA RTR /TEST COMBINATION
3301 1065 TAD K5777
3302 7040 CMA
3303 7420 SNL
3304 7440 SEA
3305 7402 HLT /CLA RTR FAILED, AC AND
/LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 41
3306 7360 CLA CMA CLL CML /AC=7777, LINK=1
3307 7206 CLA RTL /TEST COMBINATION
3310 1053 TAD K7775
3311 7040 CMA
3312 7420 SNL
3313 7440 SEA
3314 7402 HLT /CLA RTL FAILED, AC AND LINK
/SHOULDBE ZERO
/GROUP 1 OPERATE TEST 42
3315 7320 CLA CLL CML
3316 1032 TAD K0040 /AC=0040 LINK=1
3317 7110 CLL RAR /TEST COMBINATION
3320 1056 TAD K7757
3321 7040 CMA
3322 7420 SNL
3323 7440 SEA
3324 7402 HLT /CLL RAR FAILED, AC AND LINK
/SHOULD BE ZERO
/GROUP 1 OPERATE TEST 43
3325 7320 CLA CLL CML
3326 1032 TAD K0040 /AC=0040 LINK=1
3327 7104 CLL RAL /TEST COMBINATION
3330 1061 TAD K7677
3331 7040 CMA

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3332 7420      SNL
3333 7440      SZA
3334 7402      HLT          /CLL RAL FAILED, AC AND LINK
                             /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 44
3335 7520      CLA CLL CML
3336 1032      TAD K0040      /AC=0040 LINK=1
3337 7112      CLL RTR          /TEST COMBINATION
3340 1055      TAD K7767
3341 7040      CMA
3342 7420      SNL
3343 7440      SZA
3344 7402      HLT          /CLL RTR FAILED, AC AND LINK
                             /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 45
3345 7520      CLA CLL CML
3346 1032      TAD K0040      /AC=0040 LINK=1
3347 7106      CLL RTL          /TEST COMBINATION
3350 1062      TAD K7577
3351 7040      CMA
3352 7420      SNL
3353 7440      SZA
3354 7402      HLT          /CLL RTL FAILED, AC AND LINK
                             /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 46
3355 7360      CLA CLL CML CMA /AC=7777 LINK=1
3356 7310      CLL CLA RAR      /TEST COMBINATION
3357 7420      SNL
3360 7440      SZA
3361 7402      HLT          /CLL CLA RAR FAILED AC AND
                             /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 47
3362 7360      CLA CMA CLL CML /AC=7777 LINK=1
3363 7304      CLL CLA RAL      /TEST COMBINATION
3364 7420      SNL
3365 7430      SZA
3366 7402      HLT          /CLL CLA RAL FAILED, AC AND
                             /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 48
3367 7360      CLA CMA CLL CML /AC=7777 LINK=1
3370 7312      CLA CLL RTR      /TEST COMBINATION
3371 7420      SNL
3372 7440      SZA
3373 7402      HLT          /CLA CLL RTL FAILED, AC AND
                             /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 49
3374 7360      CLA CMA CLL CML /AC=7777 LINK=1
3375 7306      CLA CLL RTL      /TEST COMBINATION
3376 7420      SNL
3377 7440      SZA
3400 7402      HLT          /CLA CLL RTL FAILED, AC AND
                             /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 50

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3401 7300      CLA CLL          /AC=0000 LINK=0
3402 7030      CML RAR          /TEST COMBINATION
3403 1066      TAD K3777
3404 7040      CMA
3405 7420      SNL
3406 7440      SZA
3407 7402      HLT          /CML RAR FAILED, AC AND LINK
                             /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 51
3410 7300      CLA CLL          /AC=0000 LINK=0
3411 7024      CML RAL          /TEST COMBINATION
3412 1052      TAD K7776
3413 7040      CMA
3414 7420      SNL
3415 7440      SZA
3416 7402      HLT          /CML RAL FAILED, AC AND LINK
                             /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 52
3417 7300      CLA CLL          /AC=0000 LINK=0
3420 7032      CML RTR          /TEST COMBINATION
3421 1065      TAD K5777
3422 7040      CMA
3423 7420      SNL
3424 7440      SZA
3425 7402      HLT          /CML RTR FAILED, AC AND LINK
                             /SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 53
3426 7300      CLA CLL          /AC=0000 LINK=0
3427 7026      CML RTL          /TEST COMBINATION
3430 1053      TAD K7775
3431 7040      CMA
3432 7420      SNL
3433 7440      SZA
3434 7402      HLT          /CML RTL FAILED, AC AND LINK
                             /SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 54
3435 7300      CLA CLL
3436 1070      TAD K5252      /AC=5252 LINK=0
3437 7230      CLA CML RAR      /TEST COMBINATION
3440 1066      TAD K3777
3441 7040      CMA
3442 7420      SNL
3443 7440      SZA
3444 7402      HLT          /CLA CML RAR FAILED, AC AND

PAUSE

/INSTRUCTION TEST - 1
/GROUP 1 OPERATE TEST 55
/TAPE 3
3445 7300      CLA CLL
3446 1070      TAD K5252      /AC=5252 LINK=0
3447 7224      CLA CML RAL      /TEST COMBINATION

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3450 1052      TAD K7776
3451 7040      CMA
3452 7420      SNL
3453 7440      SZA
3454 7402      HLT          /CLA CML RAL FAILED. AC AND
                              /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 56
3455 7300      CLA CLL
3456 1070      TAD K5252      /AC=5252 LINK=0
3457 7232      CLA CML RTR    /TEST COMBINATION
3458 1065      TAD K5777
3459 7040      CMA
3460 7420      SNL
3461 7440      SZA
3462 7402      HLT          /CLA CML RTR FAILED. AC AND
                              /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 57
3465 7300      CLA CLL
3466 1070      TAD K5252      /AC=5252 LINK=0
3467 7226      CLA CML RTL    /TEST COMBINATION
3468 1053      TAD K7775
3469 7040      CMA
3470 7420      SNL
3471 7440      SZA
3472 7402      HLT          /CLA CML RTL FAILED. AC AND
                              /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 58
3475 7300      CLA CLL
3476 7130      CLL CML RAR    /AC=0000 LINK=0
3477 7004      RAL            /TEST COMBINATION
3478 7430      SEL
3479 7440      SZA
3480 7402      HLT          /CLL CML RAR FAILED. AC SHOULD
                              /BE 0000 LINK SHOULD BE 1

/GROUP 1 OPERATE TEST 59
3503 7320      CLA CLL CML    /AC=0000 LINK=1
3504 7130      CLL CML RAR    /TEST COMBINATION
3505 7004      RAL
3506 7430      SEL
3507 7440      SZA
3508 7402      HLT          /CLL CML RAR FAILED. AC SHOULD BE
                              /0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 60
3511 7300      CLA CLL
3512 7124      CLL CML RAL    /AC=0000 LINK=0
3513 7010      RAR            /TEST COMBINATION
3514 7430      SEL
3515 7440      SZA
3516 7402      HLT          /CLL CML RAL FAILED. AC SHOULD
                              /EQUAL 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 61
3517 7320      CLA CLL CML    /AC=0000 LINK=1
3518 7124      CLL CML RAL    /TEST COMBINATION

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3521 7010      RAR
3522 7430      SEL
3523 7440      SZA
3524 7402      HLT          /CLL CML RAL FAILED. AC SHOULD
                              /EQUAL 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 62
3525 7300      CLA CLL
3526 7132      CLL CML RTR    /AC=0000 LINK=0
3527 7006      RTL            /TEST COMBINATION
3528 7430      SEL
3529 7440      SZA
3530 7402      HLT          /CLL CML RTR FAILED. AC SHOULD
                              /BE 0000. LINK SHOULD BE ONE.

/GROUP 1 OPERATE TEST 63
3533 7320      CLA CLL CML    /AC=0000 LINK=1
3534 7132      CLL CML RTR    /TEST COMBINATION
3535 7006      RTL
3536 7430      SEL
3537 7440      SZA
3538 7402      HLT          /CLL CML RTR FAILED. AC SHOULD
                              /BE 0000 LINK SHOULD BE ONE.

/GROUP 1 OPERATE TEST 64
3541 7300      CLA CLL
3542 7126      CLL CML RTL    /AC=0000 LINK=0
3543 7012      RTR            /TEST COMBINATION
3544 7430      SEL
3545 7440      SZA
3546 7402      HLT          /CLL CML RTL FAILED. AC SHOULD
                              /BE 0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 65
3547 7320      CLA CLL CML    /AC=0000 LINK=1
3548 7126      CLL CML RTL    /TEST COMBINATION
3549 7012      RTR
3550 7430      SEL
3551 7440      SZA
3552 7402      HLT          /CLL CML RTL FAILED. AC SHOULD
                              /BE 0000. LINK SHOULD BE A ONE.

/GROUP 1 OPERATE TEST 66
3555 7300      CLA CLL
3556 1070      TAD K5252      /AC=5252 LINK=0
3557 7330      CLA CLL CML RAR /TEST COMBINATION
3558 7004      RAL
3559 7430      SEL
3560 7440      SZA
3561 7402      HLT          /CLA CLL CML RAR FAILED. AC SHOULD
                              /BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 67
3564 7320      CLA CLL CML
3565 1071      TAD K2525      /AC=2525 LINK=1
3566 7330      CLA CLL CML RAR /TEST COMBINATION
3567 7004      RAL
3568 7430      SEL
3569 7440      SZA

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3572 7402          HLT          /CLA CLL CML RAR FAILED. AC SHOULD
                                   /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 68
3573 7300          CLA CLL
3574 1071          TAD K2525          /AC=2525 LINK=0
3575 7324          CLA CLL CML RAL /TEST COMBINATION
3576 7010          RAR
3577 7430          SZL
3600 7440          SZA
3601 7402          HLT          /CLA CLL CML RAL FAILED. AC SHOULD
                                   /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 69
3602 7520          CLA CLL CML
3603 1070          TAD K5252          /AC=5252 LINK=1
3604 7324          CLA CLL CML RAL /TEST COMBINATION
3605 7010          RAR
3606 7430          SZL
3607 7440          SZA
3610 7402          HLT          /CLA CLL CML RAL FAILED. AC SHOULD
                                   /BE 0000 LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 70
3611 7300          CLA CLL
3612 1071          TAD K2525          /AC=2525 LINK=0
3613 7332          CLA CLL CML RTR /TEST COMBINATION
3614 7006          RTL
3615 7430          SZL
3616 7440          SZA
3617 7402          HLT          /CLA CLL CML RTR FAILED. AC SHOULD
                                   /BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 71
3620 7320          CLA CLL CML
3621 1070          TAD K5252          /AC=5252 LINK=1
3622 7332          CLA CLL CML RTR /TEST COMBINATION
3623 7006          RTL
3624 7430          SZL
3625 7440          SZA
3626 7402          HLT          /CLA CLL CML RTR FAILED. AC SHOULD
                                   /BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 72
3627 7300          CLL CLA
3630 1071          TAD K2525          /AC=2525 LINK=0
3631 7326          CLA CLL CML RTL /TEST COMBINATION
3632 7012          RTR
3633 7430          SZL
3634 7440          SZA
3635 7402          HLT          /CLA CLL CML RTL FAILED. AC SHOULD
                                   /BE 0000, LINK SHOULD BE A ZERO

/GROUP 1 OPERATE TEST 73
3636 7320          CLL CLA CML
3637 1070          TAD K5252          /AC=5252 LINK=1
3640 7326          CLA CLL CML RTL /TEST COMBINATION

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3641 7012          RTR
3642 7430          SZL
3643 7440          SZA
3644 7402          HLT          /CLA CLL CML RTL FAILED. AC SHOULD
                                   /BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 74
3645 7300          CLA CLL
3646 1067          TAD K7777          /TEST PATTERN
3647 7041          CIA          /AC EQUALS 0001
3650 1052          TAD K7776
3651 7040          CMA
3652 7420          SNL
3653 7440          SZA
3654 7402          HLT          /CIA FAILED AC SHOULD EQUAL 0000
                                   /LINK SHOULD EQUAL A ZERO

/GROUP 1 OPERATE TEST 75
3655 7300          CLA CLL
3656 1052          TAD K7776          /TEST PATTERN
3657 7041          CIA          /AC EQUALS 0002
3660 1053          TAD K7775
3661 7040          CMA
3662 7420          SNL
3663 7440          SZA
3664 7402          HLT          /CIA FAILED AC SHOULD EQUAL 0000
                                   /LINK SHOULD EQUAL A ZERO

/GROUP 1 OPERATE TEST 76
3665 7300          CLA CLL
3666 1101          TAD K7774          /TEST PATTERN
3667 7041          CIA          /AC EQUALS 0004
3670 1054          TAD K7773
3671 7040          CMA
3672 7420          SNL
3673 7440          SZA
3674 7402          HLT          /CIA FAILED AC SHOULD EQUAL 0000
                                   /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 77
3675 7300          CLA CLL
3676 1100          TAD K7770          /TEST PATTERN
3677 7041          CIA          /AC EQUALS 0010
3700 1055          TAD K7767
3701 7040          CMA
3702 7420          SNL
3703 7440          SZA
3704 7402          HLT          /CIA FAILED AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 78
3705 7300          CLA CLL
3706 1077          TAD K7760          /TEST PATTERN
3707 7041          CIA          /AC EQUALS 0020
3710 1056          TAD K7757
3711 7040          CMA
3712 7420          SNL
3713 7440          SZA
3714 7402          HLT          /CIA FAILED AC SHOULD EQUAL 0000
                                   /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 79
3715 7300          CLA CLL

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3716 1076      TAD K7740      /TEST PATTERN
3717 7041      CIA
3720 1057      TAD K7737      /AC EQUALS 0040
3721 7040      CMA
3722 7420      SNL
3723 7440      SZA
3724 7402      HLT          /CIA FAILED AC SHOULD EQUAL 0000
                          /LINK SHOULD EQUAL ZERO

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/GROUP 1 OPERATE TEST 80
3725 7300      CLA CLL
3726 1113      TAD K7700      /TEST PATTERN
3727 7041      CIA          /AC EQUALS 0100
3730 1061      TAD K7677
3731 7040      CMA
3732 7420      SNL
3733 7440      SZA
3734 7402      HLT          /CIA FAILED A SHOULD EQUAL 0000
                          /LINK SHOULD EQUAL ZERO

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/GROUP 1 OPERATE TEST 81
3735 7300      CLA CLL
3736 1075      TAD K7600      /TEST PATTERN
3737 7041      CIA          /AC EQUALS 0200
3740 1062      TAD K7577
3741 7040      CMA
3742 7420      SNL
3743 7440      SZA
3744 7402      HLT          /CIA FAILED AC SHOULD EQUAL 0000
                          /LINK SHOULD EQUAL ZERO

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/GROUP 1 OPERATE TEST 82
3745 7300      CLA CLL
3746 1074      TAD K7400      /TEST PATTERN
3747 7041      CIA          /AC EQUALS 0400
3750 1063      TAD K7377
3751 7040      CMA
3752 7420      SNL
3753 7440      SZA
3754 7402      HLT          /CIA FAILED AC SHOULD EQUAL 0000
                          /LINK SHOULD EQUAL ZERO

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/GROUP 1 OPERATE TEST 83
3755 7300      CLA CLL
3756 1073      TAD K7000      /TEST PATTERN
3757 7041      CIA          /AC EQUALS 1000
3760 1064      TAD K6777
3761 7040      CMA
3762 7420      SNL
3763 7440      SZA
3764 7402      HLT          /CIA FAILED AC SHOULD EQUAL 0000
                          /LINK SHOULD EQUAL ZERO

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/GROUP 1 OPERATE TEST 84
3765 7300      CLA CLL
3766 1072      TAD K6000      /TEST PATTERN

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3767 7041      CIA
3770 1065      TAD K5777      /AC EQUALS 2000
3771 7040      CMA
3772 7420      SNL
3773 7440      SZA
3774 7402      HLT          /CIA FAILED AC SHOULD EQUAL 0000
                          /LINK SHOULD EQUAL ZERO

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/GROUP 1 OPERATE TEST 85
3775 7300      CLA CLL
3776 1050      TAD K4000      /TEST PATTERN
3777 7041      CIA          /AC EQUALS 4000
4000 1066      TAD K3777
4001 7040      CMA
4002 7420      SNL
4003 7440      SZA
4004 7402      HLT          /CIA FAILED AC SHOULD EQUAL 000
                          /LINK SHOULD EQUAL ZERO

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/GROUP 1 OPERATE TEST 86
4005 7300      CLA CLL
4006 1020      TAD K0000      /TEST PATTERN
4007 7041      CIA          /AC EQUALS 0000, LINK EQUALS A ONE
4010 7450      SNA
4011 7420      SNL
4012 7402      HLT          /CIA FAILED AC SHOULD EQUAL 0000
                          /LINK SHOULD EQUAL A ONE

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/GROUP OPERATE TEST 87
4013 7340      CLA CMA CLL /AC=7777,L=0
4014 7311      CLA CLL IAC RAR /AC=0,L=1
4015 7430      SEL
4016 7440      SZA
4017 7402      HLT          /ERROR: LINC NOT SET OR
                          /AC NOT 0

```

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/GROUP 1 OPERATE TEST 88
4020 7360      CLA CMA CLL CML /AC=7777,L=1
4021 7305      CLA CLL IAC RAL /AC=2,L=0
4022 7430      SEL
4023 7402      HLT          /ERROR: LINC NOT 0
4024 7041      CMA IAC
4025 1022      TAD K0002
4026 7440      SZA
4027 7402      HLT          /ERROR AC NOT=2

```

```

/GROUP 1 OPERATE TEST 89
4030 7320      CLA CLL CML /AC=0,L=1
4031 7313      CLA CLL IAC RTR /AC=4000,L=0
4032 7430      SEL
4033 7402      HLT          /ERROR: LINC NOT 0
4034 7500      SNA
4035 7402      HLT          /ERROR: AC NOT 4000

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/GROUP 1 OPERATE TEST 90
4036 7360      CLA CMA CLL CML /AC=7777,L=1

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4037 7307 CLA CLL IAC RTL /AC=4,LINC=0
4040 7430 SZL
4041 7402 HLT /ERROR: LINC NOT 0
4042 7041 CMA IAC
4043 1024 TAD K0004
4044 7440 SZA
4045 7402 HLT /ERROR: AC NOT 4

/GROUP 1 OPERATE TEST 91
4046 7300 CLA CLL /AC=0, L=0
4047 7331 CLA CLL CML IAC RAR /AC=0000, L=1
4050 7520 SMA SNL
4051 7402 HLT /ERROR: AC NOT 0000 OR
/LINC NOT 1

/GROUP 1 OPERATE TEST 92
4052 7300 CLA CLL /AC=0,L=0
4053 7345 CLA CMA CLL IAC RAL /AC=0001,L=0
4054 7430 SZL
4055 7402 HLT /LINC NOT=0
4056 7041 CMA IAC
4057 1021 TAD K0001
4060 7440 SZA
4061 7402 HLT /AC NOT 0001

/GROUP 1 OPERATE TEST 93
4062 7360 CLA CMA CLL CML /AC=7777,L=1
4063 7373 CLA CMA CLL CML IAC RTR /AC=0,L=0
4064 7440 SZA
4065 7402 HLT /ERROR:
4066 7430 SZL
4067 7402 HLT /ERROR:

/GROUP 1 OPERATE TEST 94
4070 7332 CLA CLL CML RTR /L=0 AC=2000
4071 7006 RTL /L=1 AC=0000
4072 7430 SZL
4073 7440 SZA
4074 7402 HLT /CLA CLL CML RTR OR RTL FAILED

/GROUP 1 OPERATE TEST 95
4075 7360 CLA CMA CLL CML
4076 7342 CLA CLL CMA BSW/AC=7777 LINK=0
4077 7040 CMA
4100 7420 SNL
4101 7440 SZA
4102 7402 HLT /7742 FAILED

/GROUP 1 OPERATE TEST 96
4103 7360 CLA CMA CLL CML
4104 7303 CLA CLL IAC BSW /AC=0100 LINK=0
4105 1061 TAO K7677 /AC=7777
4106 7040 CMA /AC=0000

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4107 7420 SNL
4110 7440 SZA
4111 7402 HLT /7703 FAILED

/GROUP 1 OPERATE TEST 97
4112 7360 CLA CMA CLL CML
4113 7343 CLA CLL CMA IAC BSW /AC=0000 LINK=1
4114 7430 SZL
4115 7440 SZA
4116 7402 HLT /7743 FAILED

/GROUP 1 OPERATE TEST 98
4117 7360 CLA CMA CLL CML
4120 7363 CLA CLL CMA CML IAC BSW /AC=0000 LINK=0
4121 7420 SNL
4122 7440 SZA
4123 7402 HLT /7763 FAILED

/GROUP 1 OPERATE TEST 99
4124 7300 CLA CLL
4125 1043 TAO K1234
4126 7063 CMA CML IAC BSW /AC=4465 L=1
4127 1047 TAD K3312
4130 7040 CMA
4131 7430 SZL
4132 7440 SZA
4133 7402 HLT /7063 FAILED

/GROUP 1 OPERATE TEST 100
4134 7332 CLA CLL CML RTR /AC=2000 L=1
4135 7063 CMA CML IAC BSW /AC=0060 L=1
4136 1091 TAD K7717 /AC=7777 L=1
4137 7040 CMA
4140 7430 SZL
4141 7440 SZA
4142 7402 HLT /7063 FAILED

/GROUP 2 OPERATE TEST 1
4143 7240 CLA CMA /AC=7777
4144 7700 CLA SHA /TEST COMBINATION
4145 7402 HLT /CLA SHA DID NOT SKIP
/AC SHOULD BE 0000
4146 7440 SZA
4147 7402 HLT /CLA SHA DID NOT CLEAR AC
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 2
4150 7240 CLA CMA /AC=7777
4151 7640 CLA SZA /TEST COMBINATION
4152 7440 SZA
4153 7402 HLT /CLA SZA SKIPPED OR AC NOT
/CLEARED TO 0000

/GROUP 2 OPERATE TEST 3
4154 7240 CLA CMA /AC=7777

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4155 7540      SMA SZA      /TEST COMBINATION
4156 7402      HLT          /SMA SZA SHOULD HAVE SKIPPED
                          /AC SHOULD EQUAL 7777

/GROUP 2 OPERATE TEST 4
4157 7200      CLA          /AC=0000
4160 7540      SMA SZA      /TEST COMBINATION
4161 7402      HLT          /SMA SZA SHOULD HAVE SKIPPED
                          /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 5
4162 7200      CLA          /AC=3777
4163 1066      TAD K3777    /TEST COMBINATION
4164 7540      SMA SZA      /SMA SZA SHOULD NOT HAVE SKIPPED
4165 7450      SNA          /AC SHOULD EQUAL 3777
4166 7402      HLT

/GROUP 2 OPERATE TEST 6
4167 7240      CLA CMA      /AC=7777
4170 7740      CLA SMA SZA  /TEST COMBINATION
4171 7402      HLT          /CLA SMA SZA SHOULD HAVE SKIPPED
                          /AC SHOULD BE 0000

4172 7440      SZA          /AC WAS NOT CLEARED
4173 7402      HLT          /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 7
4174 7200      CLA          /AC=0000
4175 7740      CLA SMA SZA  /TEST COMBINATION
4176 7402      HLT          /CLA SMA SZA SHOULD HAVE SKIPPED
                          /AC SHOULD BE 0000

4177 7440      SZA          /AC WAS NOT CLEARED
4200 7402      HLT          /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 8
4201 7200      CLA          /AC=3777
4202 1066      TAD K3777    /TEST COMBINATION
4203 7740      CLA SMA SZA  /SMA SZA DID NOT SKIP OR AC
4204 7440      SZA          /NOT CLEARED TO 0000
4205 7402      HLT

/GROUP 2 OPERATE TEST 9
4206 7300      CLL CLA      /LINK=0
4207 1070      TAD K5252    /AC=5252
4210 7620      CLA SNL      /TEST COMBINATION
4211 7440      SZA          /SNL SKIPPED OR AC NOT CLEARED
4212 7402      HLT          /AC AND LINK SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 10
4213 7320      CLA CLL CML  /AC=2525 LINK=1
4214 1071      TAD K2525    /TEST COMBINATION
4215 7620      CLA SNL      /SNL DID NOT SKIP
4216 7402      HLT

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4217 7440      SZA          /LINK SHOULD EQUAL ONE
4220 7402      HLT          /CLA SNL DID NOT CLEAR AC
                          /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 11
4221 7300      CLA CLL      /AC=0000 LINK=0
4222 7520      SMA SNL      /TEST COMBINATION
4223 7440      SZA          /SMA SNL SKIPPED. AC AND LINK
4224 7402      HLT          /SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 12
4225 7320      CLA CLL CML  /AC=0000 LINK=1
4226 7520      SMA SNL      /TEST COMBINATION
4227 7402      HLT          /SNL SHOULD HAVE SKIPPED. LINK = 1

/GROUP 2 OPERATE TEST 13
4230 7300      CLA CLL      /AC=4000 LINK=0
4231 1050      TAD K4000    /TEST COMBINATION
4232 7520      SMA SNL      /SMA SHOULD HAVE SKIPPED
4233 7402      HLT          /AC=4000

/GROUP 2 OPERATE TEST 14
4234 7520      CLA CLL CML  /AC=4000 LINK=1
4235 1050      TAD K4000    /TEST COMBINATION
4236 7520      SMA SNL      /SMA SNL SHOULD HAVE SKIPPED
4237 7402      HLT          /AC=4000 LINK=1

/GROUP 2 OPERATE TEST 15
4240 7300      CLA CLL      /AC=0000 LINK=0
4241 7720      CLA SMA SNL  /TEST COMBINATION
4242 7440      SZA          /SMA SNL SKIPPED. AC AND LINK
4243 7402      HLT          /SHOULD BE ZERO

/GROUP 2 OPERATE TEST 16
4244 7320      CLA CLL CML  /AC=0000 LINK=1
4245 7720      CLA SMA SNL  /TEST COMBINATION
4246 7402      HLT          /SNL SHOULD HAVE SKIPPED
                          /LINK=1

4247 7440      SZA          /CLA SMA SNL DID NOT CLEAR AC
4250 7402      HLT          /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 17
4251 7300      CLA CLL      /AC=4000 LINK=0
4252 1050      TAD K4000    /TEST COMBINATION
4253 7720      CLA SMA SNL  /SMA SHOULD HAVE SKIPPED
4254 7402      HLT          /AC SHOULD EQUAL 0000 LINK=0

4255 7440      SZA          /CLA SMA SNL DID NOT CLEAR AC
4256 7402      HLT          /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 18
4257 7320      CLA CLL CML  /AC=4000 LINK=1
4260 1050      TAD K4000

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4261 7320 CLA SMA SNL /TEST COMBINATION
4262 7402 HLT /CLA SMA SNL SHOULD HAVE SKIPPED
/AC SHOULD BE 0000 LINK=1

4263 7440 SZA
4264 7402 HLT /CLA SMA SNL DID NOT CLEAR AC
/AC SHOULD BE 0000 LINK=1

/GROUP 2 OPERATE TEST 19
4265 7300 CLA CLL /AC=0000 LINK=0
4266 7460 SZA SNL /TEST COMBINATION
4267 7402 HLT /SZA SNL OIO NOT SKIP
/AC=0000

/GROUP 2 OPERATE TEST 20
4270 7320 CLL CLA CML /AC=0000 LINK=1
4271 7460 SZA SNL /TEST COMBINATION
4272 7402 HLT /SZA SNL OIO NOT SKIP
/AC=0000 LINK=1

/GROUP 2 OPERATE TEST 21
4273 7300 CLA CLL
4274 1040 TAO K0400 /AC=0400 LINK=0
4275 7460 SZA SNL /TEST COMBINATION
4276 7450 SNA
4277 7402 HLT /SZA SNL SKIPPED
/AC=0400 LINK=0

/GROUP 2 OPERATE TEST 22
4300 7320 CLA CLL CML
4301 1032 TAO K0040 /AC=0040 LINK=1
4302 7460 SZA SNL /TEST COMBINATION
4303 7402 HLT /SZA SNL SHOULD HAVE SKIPPED
/LINK=1

/GROUP 2 OPERATE TEST 23
4304 7300 CLA CLL /AC=0000 LINK=0
4305 7660 CLA SZA SNL /TEST COMBINATION
4306 7402 HLT /CLA SZA SNL SHOULD HAVE SKIPPED
/AC AND LINK SHOULD EQUAL ZERO

4307 7440 SZA
4310 7402 HLT /CLA SZA SNL DID NOT CLEAR AC
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 24
4311 7320 CLA CLL CML /AC=0000 LINK=1
4312 7660 CLA SZA SNL /TEST COMBINATION
4313 7402 HLT /CLA SZA SNL SHOULD HAVE SKIPPED
/AC=0000 LINK=1

4314 7440 SZA
4315 7402 HLT /CLA SZA SNL DID NOT CLEAR AC
/AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 25
4316 7320 CLA CLL CML
4317 1036 TAO K0200 /AC=0200 LINK=1
4320 7660 CLA SZA SNL /TEST COMBINATION OR
4321 7402 HLT /CLA SZA SNL SHOULD HAVE SKIPPED
/LINK=1

4322 7440 SZA
4323 7402 HLT /CLA SZA SNL DID NOT CLEAR AC

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/AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 26
4324 7300 CLA CLL
4325 1045 TAO K2000 /AC=2000 LINK=0
4326 7660 CLA SZA SNL /TEST COMBINATION
4327 7440 SZA
4330 7402 HLT /CLA SZA SNL FAILED, AC AND
/LINK SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 27
4331 7300 CLA CLL /AC=0000 LINK=0
4332 7560 SMA SZA SNL /TEST COMBINATION
4333 7402 HLT /SMA SZA SNL SHOULD HAVE SKIPPED
/AC=0000 LINK=0

/GROUP 2 OPERATE TEST 28
4334 7320 CLA CLL CML
4335 1066 TAO K3777 /AC=3777 LINK=1
4336 7560 SMA SZA SNL /TEST COMBINATION
4337 7402 HLT /SMA SZA SNL SHOULD HAVE SKIPPED
/AC=3777 LINK=1

/GROUP 2 OPERATE TEST 29
4340 7300 CLA CLL
4341 1050 TAO K4000 /AC=4000 LINK=0
4342 7560 SMA SZA SNL /TEST COMBINATION
4343 7402 HLT /SMA SZA SNL SHOULD HAVE SKIPPED
/AC=4000 LINK=0

/GROUP 2 OPERATE TEST 30
4344 7300 CLA CLL
4345 1066 TAO K3777 /AC=3777 LINK=0
4346 7560 SMA SZA SNL /TEST COMBINATION
4347 7450 SNA
4350 7402 HLT /SMA SZA SNL SHOULD NOT HAVE
/SKIPPED, AC=3777 LINK=0

/GROUP 2 OPERATE TEST 31
4351 7300 CLA CLL /AC=0000 LINK=0
4352 7760 CLA SMA SZA SNL /TEST COMBINATION
4353 7402 HLT /CLA SMA SZA SNL SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0000

4354 7440 SZA
4355 7402 HLT /AC NOT ZERO AFTER CLA SMA SZA SNL
/AC SHOULD BE 0000 LINK=0

/GROUP 2 OPERATE TEST 32
4356 7320 CLA CLL CML
4357 1066 TAO K3777 /AC=3777 LINK=1
4360 7760 CLA SMA SZA SNL /TEST COMBINATION
4361 7402 HLT /CLA SMA SZA SNL OIO NOT SKIP
/AC SHOULD BE 0000 LINK=1

4362 7440 SZA
4363 7402 HLT /CLA SMA SZA SNL DID NOT CLEAR AC
/AC SHOULD EQUAL 0000 LINK=1

/GROUP 2 OPERATE TEST 33
4364 7300 CLA CLL

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4365 1050      TAD K4000      /AC=4000 LINK=0
4366 7760      CLA SMA SZA SNL /TEST COMBINATION
4367 7402      HLT           /CLA SMA SZA SNL SHOULD HAVE SKIPPED
                        /AC SHOULD BE 0000. LINK=0

4370 7440      SZA
4371 7402      HLT           /CLA SMA SZA SNL DID NOT CLEAR AC
                        /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 34
4372 7300      CLA CLL
4373 1066      TAD K3777      /AC=3777 LINK=0
4374 7760      CLA SMA SZA SNL /TEST COMBINATION
4375 7440      SZA
4376 7402      HLT           /CLA SMA SZA SNL FAILED. AC
                        /SHOULD BE ZERO. LINK=0

/GROUP 2 OPERATE TEST 35
4377 7300      CLA CLL      /AC=0000 LINK=0
4400 7410      SKP          /TEST INSTRUCTION
4401 7402      HLT          /SKIP FAILED
                        /AC AND LINK EQUAL ZERO

/GROUP 2 OPERATE TEST 36
4402 7320      CLA CLL CML   /AC=0000 LINK=1
4403 7410      SKP          /TEST INSTRUCTION
4404 7402      HLT          /SKIP FAILED
                        /AC=0000 LINK=1

/GROUP 2 OPERATE TEST 37
4405 7320      CLA CLL CML
4406 1066      TAD K3777      /AC=3777 LINK=1
4407 7410      SKP          /TEST INSTRUCTION
4410 7402      HLT          /SKIP FAILED
                        /AC=3777 LINK=1

/GROUP 2 OPERATE TEST 38
4411 7300      CLA CLL
4412 1066      TAD K3777      /AC=3777 LINK=0
4413 7410      SKP          /TEST INSTRUCTION
4414 7402      HLT          /SKIP FAILED
                        /AC=3777 LINK=0

/GROUP 2 OPERATE TEST 39
4415 7200      CLA
4416 1066      TAD K3777      /AC=3777
4417 7710      CLA SPA       /TEST COMBINATION
4420 7402      HLT          /CLA SPA DID NOT SKIP. AC
                        /SHOULD BE ZERO

4421 7440      SZA
4422 7402      HLT          /CLA SPA DID NOT CLEAR AC
                        /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 40
4423 7200      CLA
4424 1050      TAD K4000      /AC=4000
4425 7710      CLA SPA       /TEST COMBINATION
4426 7440      SZA
4427 7402      HLT          /CLA SPA FAILED. AC SHOULD
                        /EQUAL 0000

/GROUP 2 OPERATE TEST 41

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4430 7240      CLA CMA       /AC=7777
4431 7650      CLA SNA       /TEST COMBINATION
4432 7402      HLT          /CLA SNA DID NOT SKIP
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 42
4433 7200      CLA
4434 7650      CLA SNA       /AC=0000
4435 7440      SZA          /TEST COMBINATION
4436 7402      HLT          /CLA SNA FAILED
                        /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 43
4437 7200      CLA
4440 7550      SPA SNA       /AC=0000
4441 7440      SZA          /TEST COMBINATION (AND)
4442 7402      HLT          /SPA SNA SKIPPED
                        /AC=0000

/GROUP 2 OPERATE TEST 44
4443 7200      CLA
4444 1066      TAD K3777      /AC=3777
4445 7550      SPA SNA       /TEST COMBINATION (AND)
4446 7402      HLT          /SPA SNA FAILED TO SKIP
                        /AC=3777

/GROUP 2 OPERATE TEST 45
4447 7200      CLA
4450 1050      TAD K4000      /AC=4000
4451 7550      SPA SNA       /TEST COMBINATION (AND)
4452 7450      SNA
4453 7402      HLT          /SPA SNA SKIPPED.
                        /AC=4000

/GROUP 2 OPERATE TEST 46
4454 7200      CLA
4455 7750      CLA SPA SNA    /AC=0000
4456 7440      SZA          /TEST COMBINATION (AND)
4457 7402      HLT          /CLA SPA SNA FAILED.
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 47
4460 7200      CLA
4461 1066      TAD K3777      /AC=3777
4462 7750      CLA SPA SNA    /TEST COMBINATION (AND)
4463 7402      HLT          /CLA SPA SNA DID NOT SKIP
                        /AC SHOULD BE 0000

4464 7440      SZA
4465 7402      HLT          /CLA SPA SNA DID NOT CLEAR THE AC
                        /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 48
4466 7200      CLA
4467 1050      TAD K4000      /AC=4000
4470 7750      CLA SPA SNA    /TEST COMBINATION (AND)
4471 7440      SZA
4472 7402      HLT          /CLA SPA SNA FAILED
                        /AC SHOULD EQUAL ZERO

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PAUSE

/INSTRUCTION TEST - TAPE 4

/GROUP 2 OPERATE TEST 49

4473	7300	CLA CLL	
4474	1070	TAD K5252	/AC=5252 LINK=0
4475	7630	CLA SZL	/TEST COMBINATION
4476	7402	HLT	/CLA SZL DID NOT SKIP
			/AC AND LINK SHOULD BE 0
4477	7440	SZA	
4500	7402	HLT	/CLA SZL DID NOT CLEAR AC
			/AC SHOULD BE ZERO. LINK=0

/GROUP 2 OPERATE TEST 50

4501	7360	CLA CLL CML CMA	/AC=7777 LINK=1
4502	7630	CLA SZL	/TEST COMBINATION (AND)
4503	7440	SZA	
4504	7402	HLT	/CLA SZL FAILED. AC SHOULD
			/BE 0000. LINK=1

/GROUP 2 OPERATE TEST 51

4505	7300	CLA CLL	
4506	1066	TAD K3777	/AC=3777 LINK=0
4507	7530	SPA SZL	/TEST COMBINATION (AND)
4510	7402	HLT	/SPA SZL DID NOT SKIP
			/AC=3777 LINK=0

/GROUP 2 OPERATE TEST 52

4511	7520	CLA CLL CML	
4512	1066	TAD K3777	/AC=3777 LINK=1
4513	7530	SPA SZL	/TEST COMBINATION (AND)
4514	7450	SNA	
4515	7402	HLT	/SPA SZL SKIPPED
			/AC=3777 LINK=1

/GROUP 2 OPERATE TEST 53

4516	7300	CLA CLL	
4517	1050	TAD K4000	/AC=4000 LINK=0
4520	7530	SPA SZL	/TEST COMBINATION (AND)
4521	7500	SMA	
4522	7402	HLT	/SPA SZL SKIPPED
			/AC=4000 LINK=0

/GROUP 2 OPERATE TEST 54

4523	7300	CLA CLL	
4524	1066	TAD K3777	/AC=3777 LINK=0
4525	7730	CLA SPA SZL	/TEST COMBINATION (AND)
4526	7402	HLT	/CLA SPA SZL SHOULD HAVE SKIPPED
			/AC SHOULD BE 0000. LINK=0
4527	7440	SZA	
4530	7402	HLT	/CLA SPA SZL DID NOT CLEAR THE AC
			/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 55

4531	7320	CLA CLL CML	
4532	1066	TAD K3777	/AC=3777 LINK=1
4533	7730	CLA SPA SZL	/TEST COMBINATION (AND)

4534	7440	SZA	
4535	7402	HLT	/CLA SPA SZL FAILED
			/AC SHOULD EQUAL 0000 LINK=1

/GROUP 2 OPERATE TEST 56

4536	7300	CLA CLL	
4537	1050	TAD K4000	/AC=4000 LINK=0
4540	7730	CLA SPA SZL	/TEST COMBINATION (AND)
4541	7440	SZA	
4542	7402	HLT	/CLA SPA SZL FAILED
			/AC SHOULD EQUAL 0000 LINK=0

/GROUP 2 OPERATE TEST 57

4543	7300	CLA CLL	
4544	1050	TAD K4000	/AC=4000 LINK=0
4545	7470	SNA SZL	/TEST COMBINATION (AND)
4546	7402	HLT	/SNA SZL DID NOT SKIP
			/AC = 4000 LINK=0

/GROUP 2 OPERATE TEST 58

4547	7320	CLA CLL CML	
4550	1050	TAD K4000	/AC=4000 LINK=1
4551	7470	SNA SZL	/TEST COMBINATION (AND)
4552	7420	SNL	
4553	7402	HLT	/SNA SZL SKIPPED
			/AC=4000 LINK=1

/GROUP 2 OPERATE TEST 59

4554	7300	CLA CLL	/AC=0000 LINK=0
4555	7470	SNA SZL	/TEST COMBINATION (AND)
4556	7430	SZL	
4557	7402	HLT	/SNA SZL SKIPPED
			/AC=0000 LINK=0

/GROUP 2 OPERATE TEST 60

4560	7320	CLA CLL CML	
4561	1050	TAD K4000	/AC=4000 LINK=1
4562	7670	CLA SNA SZL	/TEST COMBINATION (AND)
4563	7440	SZA	
4564	7402	HLT	/CLA SNA SZL FAILED. AC SHOULD
			/BE 0000. LINK=1

/GROUP 2 OPERATE TEST 61

4565	7300	CLA CLL	
4566	1050	TAD K4000	/AC=4000 LINK=0
4567	7670	CLA SNA SZL	/TEST COMBINATION (AND)
4570	7402	HLT	/CLA SNA SZL DID NOT SKIP
			/AC SHOULD BE 0000. LINK=0
4571	7440	SZA	
4572	7402	HLT	/CLA SNA SZL DID NOT CLEAR AC
			/AC AND LINK SHOULD BE ZERO

/GROUP 2 OPERATE TEST 62

4573	7300	CLA CLL	/AC=0000 LINK=0
4574	7670	CLA SNA SZL	/TEST COMBINATION (AND)
4575	7440	SZA	
4576	7402	HLT	/CLA SNA SZL FAILED. AC SHOULD
			/BE 0000. LINK=0

/GROUP 2 OPERATE TEST 63

4577	7300	CLA CLL	
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4600 1066      TAD K3777          /AC=3777 LINK=0
4601 7570      SPA SNA SZL      /TEST COMBINATION (AND)
4602 7402      HLT              /SPA SNA SZL DID NOT SKIP
                                /AC=3777 LINK=0

/GROUP 2 OPERATE TEST 64
4603 7320      CLA CLL CML
4604 1066      TAD K3777          /AC=3777 LINK=1
4605 7570      SPA SNA SZL      /TEST COMBINATION (AND)
4606 7420      SNL
4607 7402      HLT              /SPA SNA SZL SKIPPED
                                /AC=3777 LINK=1

/GROUP 2 OPERATE TEST 65
4610 7300      CLA CLL
4611 7570      SPA SNA SZL      /AC=0000 LINK=0
4612 7430      SZL              /TEST COMBINATION (AND)
4613 7402      HLT              /SPA SNA SZL SKIPPED
                                /AC=0000 LINK=0

/GROUP 2 OPERATE TEST 66
4614 7300      CLA CLL
4615 1050      TAD K4000          /AC=4000 LINK=0
4616 7570      SPA SNA SZL      /TEST COMBINATION (AND)
4617 7430      SZL
4620 7402      HLT              /SPA SNA SZL SKIPPED
                                /AC=4000 LINK=0

/GROUP 2 OPERATE TEST 67
4621 7300      CLA CLL
4622 1066      TAD K3777          /AC=3777 LINK=0
4623 7770      CLA SPA SNA SZL /TEST COMBINATION (AND)
4624 7402      HLT              /CLA SPA SNA SZL DID NOT SKIP
                                /AC AND LINK SHOULD BE ZERO

4625 7440      SZA
4626 7402      HLT              /CLA SPA SNA SZL DID NOT CLEAR AC
                                /AC AND LINK SHOULD BE ZERO

/GROUP 2 OPERATE TEST 68
4627 7320      CLA CLL CML
4630 1066      TAD K3777          /AC=3777 LINK=1
4631 7770      CLA SPA SNA SZL /TEST COMBINATION (AND)
4632 7440      SZA
4633 7402      HLT              /CLA SPA SNA SZL FAILED. AC SHOULD
                                /BE 0000, LINK SHOULD EQUAL ONE

/GROUP 2 OPERATE TEST 69
4634 7300      CLA CLL
4635 1050      TAD K4000          /AC=4000 LINK=0
4636 7770      CLA SPA SNA SZL /TEST COMBINATION (AND)
4637 7440      SZA
4640 7402      HLT              /CLA SPA SNA SZL FAILED. AC SHOULD
                                /BE 0000, LINK SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 70
4641 7300      CLA CLL
4642 7770      CLA SPA SNA SZL /AC=0000 LINK=0
4643 7440      SZA              /TEST COMBINATION (AND)
4644 7402      HLT              /CLA SPA SNA SZL FAILED. AC AND

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                                /LINK SHOULD BE ZERO.

/GROUP 2 OPERATE TEST 71
4645 7200      CLA
4646 1070      TAD K5252          /AC=5252
4647 7604      CLA OSR          /TEST COMBINATION
4650 7040      CMA
4651 7440      SZA
4652 7402      HLT              /CLA OSR FAILED
                                /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 72
4653 7200      CLA
4654 1050      TAD K4000          /AC=4000
4655 7504      SMA OSR          /TEST COMBINATION
4656 7402      HLT              /SMA OSR FAILED TO SKIP
                                /AC SHOULD BE 7777

4657 7040      CMA
4660 7440      SZA
4661 7402      HLT              /SMA OSR FAILED
                                /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 73
4662 7200      CLA
4663 7444      SZA OSR          /AC=0000
4664 7402      HLT              /TEST COMBINATION
                                /SZA OSR FAILED TO SKIP
                                /AC SHOULD BE 0000

4665 7040      CMA
4666 7440      SZA
4667 7402      HLT              /SZA OSR FAILED.
                                /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 74
4670 7320      CLL CML CLA
4671 7424      SNL OSR          /LINK=1
4672 7402      HLT              /TEST COMBINATION
                                /SNL OSR FAILED TO SKIP
                                /AC SHOULD BE 7777

4673 7040      CMA
4674 7440      SZA
4675 7402      HLT              /SNL OSR FAILED.
                                /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 75
4676 7300      CLA CLL
4677 1066      TAD K3777          /AC=3777 LINK=0
4700 7764      CLA SMA SZA SNL OSR /TEST COMBINATION
4701 7450      SNA
4702 7402      HLT              /CLA SMA SZA SNL OSR FAILED.
                                /AC SHOULD BE 7777. LINK=0

4703 7040      CMA
4704 7440      SZA
4705 7402      HLT              /CLA SMA SZA SNL OSR FAILED
                                /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 76
4706 7200      CLA
4707 7414      SKP OSR          /AC=0000
4710 7402      HLT              /TEST COMBINATION
                                /SKP OSR DID NOT SKIP
                                /AC SHOULD BE 7777

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4711 7040      CMA
4712 7440      SEA
4713 7402      HLT          /SKP OSR FAILED
                               /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 77
4714 7200      CLA          /AC=0000
4715 7514      SPA OSR      /TEST COMBINATION
4716 7402      HLT          /SPA OSR DID NOT SKIP
                               /AC SHOULD EQUAL 7777

4717 7040      CMA
4720 7440      SEA
4721 7402      HLT          /SPA OSR FAILED.
                               /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 78
4722 7200      CLA
4723 1040      TAD K0400     /AC=0400
4724 7454      SNA OSR      /TEST COMBINATION
4725 7402      HLT          /SNA OSR DID NOT SKIP
                               /AC SHOULD BE 7777

4726 7040      CMA
4727 7440      SEA
4730 7402      HLT          /SNA OSR FAILED
                               /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 79
4731 7300      CLA CLL      /LINK=0 AC=0000
4732 7434      SZL OSR      /TEST COMBINATION
4733 7402      HLT          /SZL OSR DID NOT SKIP
                               /AC SHOULD BE 7777

4734 7040      CMA
4735 7440      SEA
4736 7402      HLT          /SZL OSR FAILED
                               /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 80
4737 7300      CLA CLL
4740 1066      TAD K3777     /AC=3777 LINK=0
4741 7774      CLA SPA SNA SZL OSR /TEST COMBINATION (AND)
4742 7402      HLT          /ABOVE MESS DID NOT SKIP
                               /AC SHOULD BE 7777

4743 7040      CMA
4744 7440      SEA
4745 7402      HLT          /CLA SPA SNA SZL OSR FAILED
                               /AC SHOULD BE 0000

/HQ OPERATE TEST 1
4746 7360      CLA CMA CLL CML /AC=7777 LINK=1
4747 7601      CLAE         /AC=0000 LINK=1
4750 7430      SZL
4751 7440      SEA
4752 7402      HLT          /7601 FAILED

/HQ OPERATE TEST 2
4753 7360      CLA CLL CMA CML /AC=7777 L=1

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4754 7401      NOPE
4755 7040      CMA          /AC=7777 L=1 (NOP)
4756 7430      SZL
4757 7440      SEA
4760 7402      HLT          /7401 FAILED

/HQ OPERATE TEST 3
4761 7360      CLA CMA CLL CML /AC=7777 LINK=1
4762 7421      MQL          /AC=0000 LINK=1
4763 7430      SZL
4764 7440      SEA
4765 7402      HLT          /MQL DID NOT CLEAR AC

/HQ OPERATE TEST 4
4766 7300      CLA CLL
4767 7421      MQL          /MQ=0000, AC=0000
4770 7040      CMA          /AC=7777
4771 7501      MQA          /AC=7777, MQ=0000
4772 7040      CMA          /AC=0000
4773 7420      SNL
4774 7440      SEA
4775 7402      HLT          /MQ DID NOT EQUAL 0000 OR MQA FAILED

/HQ OPERATE TEST 5
4776 7340      CLA CMA CLL
4777 7421      MQL          /MQ=7777, AC=0000
5000 7501      MQA          /AC=7777, MQ=7777
5001 7040      CMA
5002 7420      SNL
5003 7440      SEA
5004 7402      HLT          /MQ DID NOT EQUAL 7777 OR MQA FAILED

/HQ OPERATE TEST 6
5005 7601      CLAE         /CLEAR AC
5006 1070      TAD K5252
5007 7421      MQL          /MQ=5252, AC=0000
5010 1071      TAD K2525
5011 7501      MQA          /AC=7777, MQ=5252
5012 7040      CMA
5013 7440      SEA
5014 7402      HLT          /MQ DID NOT EQUAL 5252 OR MQA FAILED

/HQ OPERATE TEST 7
5015 7360      CLA CMA CLL CML /MQ=7777, AC=0000
5016 7421      MQL          /AC=7777
5017 7040      CMA          /AC AND MQ.=0000
5020 7621      CAM
5021 7440      SEA
5022 7402      HLT          /AC SHOULD EQUAL 0000
5023 7501      MQA          /AC=0000, MQ=0000
5024 7430      SZL
5025 7440      SEA
5026 7402      HLT          /CAM DID NOT CLEAR MQ
                               /OR LINK WAS CLEARED

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/HQ OPERATE TEST 8		
5027 7601	CLAE	/CLEAR AC
5030 7421	MQL	/MQ=0000 AC=0000
5031 7040	CMA	
5032 7701	ACL	/AC=0000 MQ=0000
5033 7440	SEA	
5034 7402	HLT	/ACL FAILED
5035 7501	MQA	/AC=0000 MQ=0000
5036 7440	SEA	
5037 7402	HLT	/MQ SHOULD EQUAL 0000
/HQ OPERATE TEST 9		
5040 7240	CLA CMA	
5041 7421	MQL	/MQ=7777 AC=0000
5042 7701	ACL	/AC=7777 MQ=7777
5043 7040	CMA	
5044 7440	SEA	
5045 7402	HLT	/ACL FAILED
5046 7501	MQA	/AC=7777, MQ=7777
5047 7040	CMA	
5050 7440	SEA	
5051 7402	HLT	/MQ SHOULD EQUAL 7777
/HQ OPERATE TEST 10		
5052 7601	CLAE	/CLEAR AC
5053 1070	TAD K5252	
5054 7421	MQL	/MQ=5252 AC=0000
5055 1071	TAD K2525	
5056 7701	ACL	/AC=5252 MQ=5252
5057 1071	TAD K2525	
5060 7040	CMA	
5061 7440	SEA	
5062 7402	HLT	/ACL FAILED
5063 7501	MQA	/AC=5252 MQ=5252
5064 1071	TAD K2525	
5065 7040	CMA	
5066 7440	SEA	
5067 7402	HLT	/MQ SHOULD EQUAL 5252
/HQ OPERATE TEST 11		
5070 7601	CLAE	/CLEAR AC
5071 1071	TAD K2525	
5072 7421	MQL	/MQ=2525 AC=0000
5073 1070	TAD K5252	
5074 7701	ACL	/AC=2525 MQ=2525
5075 1070	TAD K5252	
5076 7040	CMA	
5077 7440	SEA	
5100 7402	HLT	/ACL FAILED
5101 7501	MQA	/AC=2525 MQ=2525
5102 1070	TAD K5252	
5103 7040	CMA	
5104 7440	SEA	
5105 7402	HLT	/MQ SHOULD EQUAL 2525

/HQ OPERATE TEST 12		
5106 7621	CAM	/MQ=0000 AC=0000
5107 7040	CMA	/AC=7777
5110 7521	SWP	/MQ=7777 AC=0000
5111 7440	SEA	
5112 7402	HLT	/AC SHOULD EQUAL 0000
5113 7701	ACL	/AC=7777 MQ=7777
5114 7040	CMA	
5115 7440	SEA	
5116 7402	HLT	/MQ SHOULD EQUAL 7777
/HQ OPERATE TEST 13		
5117 7621	CAM	/MQ=0000 AC=0000
5120 7040	CMA	
5121 7421	MQL	/MQ=7777 AC=0000
5122 7521	SWP	/MQ=0000 AC=7777
5123 7040	CMA	
5124 7440	SEA	
5125 7402	HLT	
5126 7701	ACL	/AC=0000 MQ=0000
5127 7440	SEA	
5130 7402	HLT	/MQ SHOULD EQUAL 0000
/HQ OPERATE TEST 14		
5131 7621	CAM	/MQ=0000 AC=0000
5132 1070	TAD K5252	
5133 7421	MQL	/MQ=5252 AC=0000
5134 1071	TAD K2525	
5135 7521	SWP	/MQ=2525 AC=5252
5136 1071	TAD K2525	
5137 7040	CMA	
5140 7440	SEA	
5141 7402	HLT	/SWP FAILED
5142 7701	ACL	/AC=2525 MQ=2525
5143 1070	TAD K5252	
5144 7040	CMA	
5145 7440	SEA	
5146 7402	HLT	/SWP FAILED MQ SHOULD EQUAL 2525
/HQ OPERATE TEST 15		
5147 7621	CAM	/MQ=0000 AC=0000
5150 1071	TAD K2525	
5151 7421	MQL	/MQ=2525 AC=0000
5152 1070	TAD K5252	/AC=5252
5153 7521	SWP	/MQ=5252 AC=2525
5154 1070	TAD K5252	
5155 7040	CMA	
5156 7440	SEA	
5157 7402	HLT	/SWP FAILED
5160 7701	ACL	/AC=5252 MQ=5252
5161 1071	TAD K2525	
5162 7040	CMA	
5163 7440	SEA	

5164	7402	HLT	/SWP FAILED HQ SHOULD EQUAL 5252
/MQ OPERATE TEST 16			
5165	7621	CAM	/MQ=0000 AC=0000
5166	7040	CMA	/AC=7777
5167	7721	CLAE SWP	/AC=0000 MQ=0000
5170	7440	SEA	
5171	7402	HLT	/CLAE SWP FAILED AC SHOULD EQUAL 0000
5172	7701	ACL	/AC=0000 MQ=0000
5173	7440	SEA	
5174	7402	HLT	/CLAE SWP FAILED MQ SHOULD EQUAL 0000
/MQ OPERATE TEST 17			
5175	7621	CAM	/MQ=0000 AC=0000
5176	7040	CMA	
5177	7421	MQL	/MQ=7777 AC=0000
5200	7721	CLAE SWP	/AC=7777 MQ=0000
5201	7040	CMA	
5202	7440	SEA	
5203	7402	HLT	/CLAE SWP FAILED
5204	7701	ACL	/AC=0000 MQ=0000
5205	7440	SEA	
5206	7402	HLT	/CLAE SWP FAILED MQ SHOULD EQUAL 0000
/MQ OPERATE TEST 18			
5207	7621	CAM	/MQ=0000 AC=0000
5210	1071	TAD K2525	
5211	7421	MQL	/MQ=2525 MQ=0000
5212	1070	TAD K5252	/AC=5252
5213	7721	CLAE SWP	/AC=2525 MQ=0000
5214	1070	TAD K5252	
5215	7040	CMA	
5216	7440	SEA	
5217	7402	HLT	/CLAE FAILED
5220	7701	ACL	/AC=0000 MQ=0000
5221	7440	SEA	
5222	7402	HLT	/CLAE FAILED MQ SHOULD EQUAL 0000
/AND TEST 1			
5223	7200	CLA	
5224	0067	AND K7777	
5225	7440	SEA	
5226	7402	HLT	/AND FAILED AC SHOULD /BE 0000
/AND TEST 2			
5227	7240	CLA CMA	
5230	0020	AND K0000	
5231	7440	SEA	
5232	7402	HLT	/AND FAILED /AC SHOULD EQUAL 0000
/AND TEST 3			
5233	7320	CLA CLL CML	

5234	1067	TAD K7777	/AC=7777 LINK=1
5235	0067	AND K7777	
5236	7040	CMA	
5237	7430	SZL	
5240	7440	SEA	
5241	7402	HLT	/AND FAILED, AC SHOULD BE /0000. LINK SHOULD EQUAL ONE
/AND TEST 4			
5242	7300	CLA CLL	
5243	1071	TAD K2525	/AC=2525 LINK=0
5244	0070	AND K5252	
5245	7420	SNL	
5246	7440	SEA	
5247	7402	HLT	/AND FAILED, AC SHOULD BE /0000. LINK SHOULD BE 0
/AND TEST 5			
5250	7300	CLA CLL	
5251	1070	TAD K5252	/AC=5252 LINK=0
5252	0071	AND K2525	
5253	7420	SNL	
5254	7440	SEA	
5255	7402	HLT	/AND FAILED, AC SHOULD BE /0000. LINK SHOULD BE 0
/AND TEST 6			
5256	7300	CLA CLL	
5257	1052	TAD K7776	/AC=7776 LINK=0
5260	0070	AND K5252	/TEST INSTRUCTION
5261	7041	CIA	/AC=2526
5262	1070	TAD K5252	/AC=0000 LINK=1
5263	7430	SZL	
5264	7440	SEA	
5265	7402	HLT	/AND FAILURE, AC SHOULD BE /0000. LINK SHOULD BE ONE
/AND TEST 7			
5266	7300	CLA CLL	
5267	1071	TAD K2525	/AC=2525 LINK=0
5270	0071	AND K2525	/TEST INSTRUCTION
5271	7041	CIA	/AC=5253
5272	1071	TAD K2525	/AC=0000 LINK = 1
5273	7430	SZL	
5274	7440	SEA	
5275	7402	HLT	/AND FAILED, AC SHOULD BE /0000. LINK SHOULD BE ONE,
/CHECK FOR BELL			
5276	7200	CLA	
5277	1121	TAD BLCNT	
5300	7001	IAC	
5301	3121	OCA BLCNT	
5302	1121	TAD BLCNT	
5303	7640	SEA CLA	
5304	5147	JMP START+3	
5305	1122	TAD BLCNT	


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5306 3121      DCA BLCNT
          /RING BELL
5307 1120      TAD BEL
5310 6046      TLS
5311 6041      TSF
5312 5311      JMP .-1
5313 6042      TCF
5314 5147      JMP START+3
    
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0000 11111111 10000000 11111111 11111111 11111111 11111111 11111111 11111111
0100 11111111 11111111 11100000 00000000 00001111 11111111 11111111 11111111

0200 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
0300 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

0400 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
0500 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

0600 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
0700 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

1000 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
1100 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

1200 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
1300 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

1400 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
1500 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

1600 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
1700 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

2000 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
2100 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

2200 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
2300 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

2400 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
2500 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

2600 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
2700 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

3000 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
3100 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

3200 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
3300 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

3400 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
3500 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

3600 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
3700 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
    
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4000 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
4100 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

4200 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
4300 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

4400 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
4500 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

4600 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
4700 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

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5000 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
5100 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111

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5200 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
5300 11111111 11111000 00000000 00000000 00000000 00000000 00000000 00000000

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5400
5500

5600
5700

6000
6100

6200
6300

6400
6500

6600
6700

7000
7100

7200
7300

7400
7500

7600
7700

```

ACL      7701      K600      0041
BEGIN    0200      K6000     0072
BEL      0120      K6777     0064
BLCNT    0121      K7000     0073
BLCON    0122      K7007     0117
BSW      7002      K7177     0060
CAM      7621      K7377     0063
CLAE     7601      K7400     0074
CLL1     0446      K7577     0062
CLL11    0452      K7600     0075
CMLT1    0456      K7677     0061
HALT     0006      K7700     0113
K0000    0020      K7717     0051
K0001    0021      K7737     0057
K0002    0022      K7740     0076
K0004    0024      K7757     0056
K0007    0102      K7760     0077
K0010    0026      K7767     0055
K0017    0104      K7770     0100
K0020    0030      K7773     0054
K0037    0105      K7774     0101
K0040    0032      K7775     0053
K0067    0103      K7776     0052
K0077    0106      K7777     0067
K0100    0034      MQA       7501
K0177    0107      MQL       7421
K0200    0036      NOOP      0007
K0377    0110      NOPE      7401
K0400    0040      START     0144
K0770    0116      SWP       7521
K0777    0111
K1000    0042
K1234    0043
K14      0027
K140     0035
K1400    0044
K1777    0112
K2000    0045
K2525    0071
K2552    0115
K3        0023
K30      0031
K300     0037
K3000    0046
K3312    0047
K3777    0066
K4000    0050
K5225    0114
K5252    0070
K5777    0065
K6        0025
K60      0033

```


ERRORS DETECTED: 0

LINKS GENERATED: 0

RUN-TIME: 30 SECONDS

2K CORE USED

